

FIG. 1

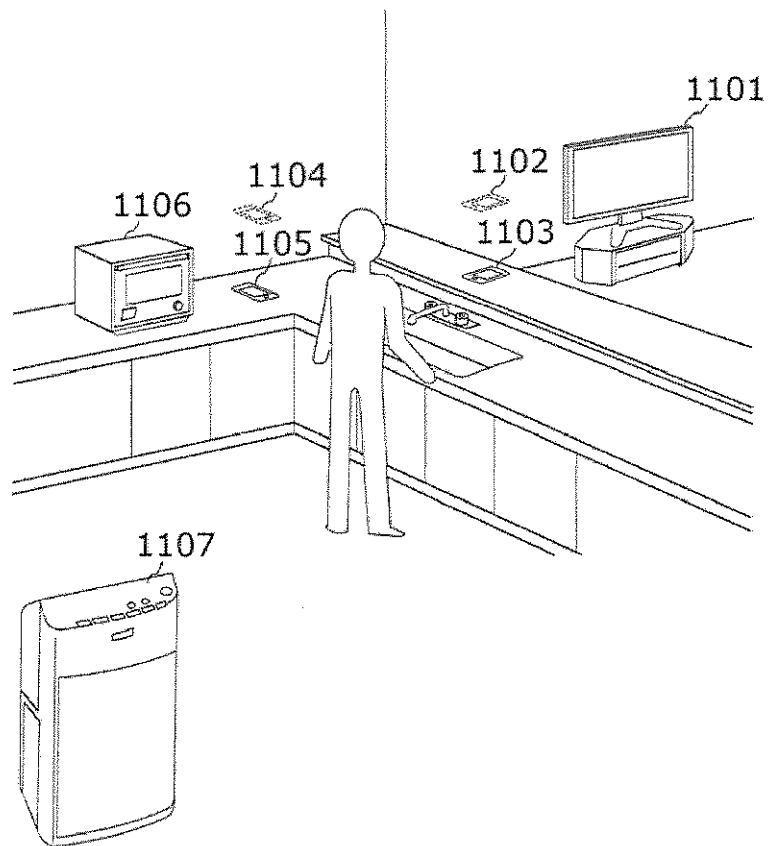


FIG. 2

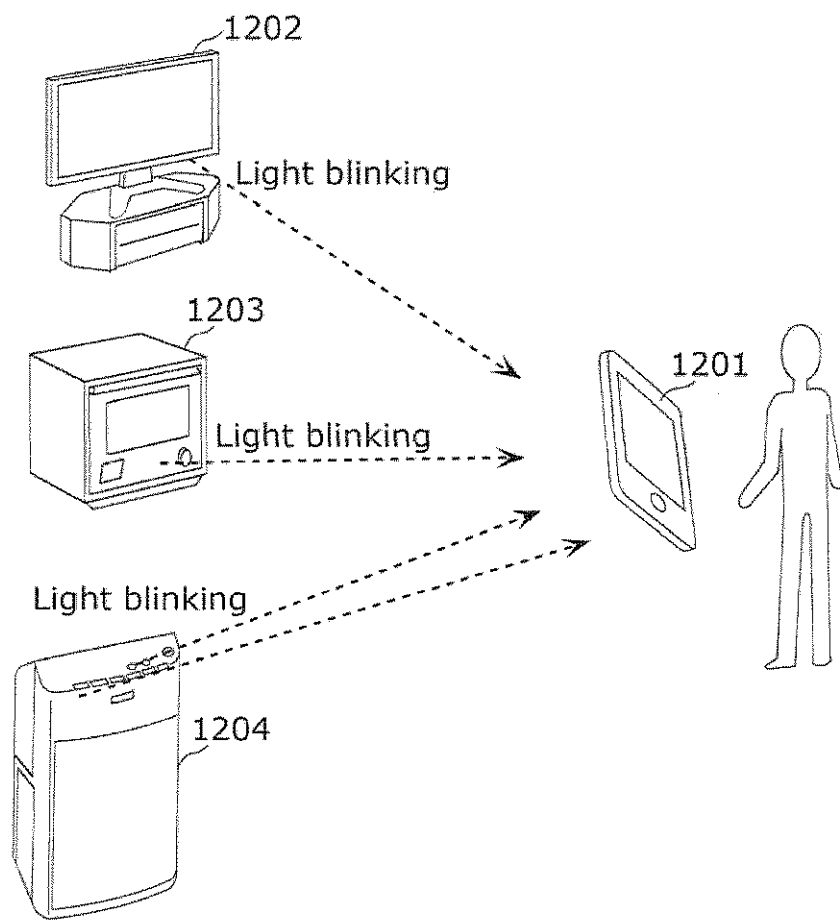


FIG. 3

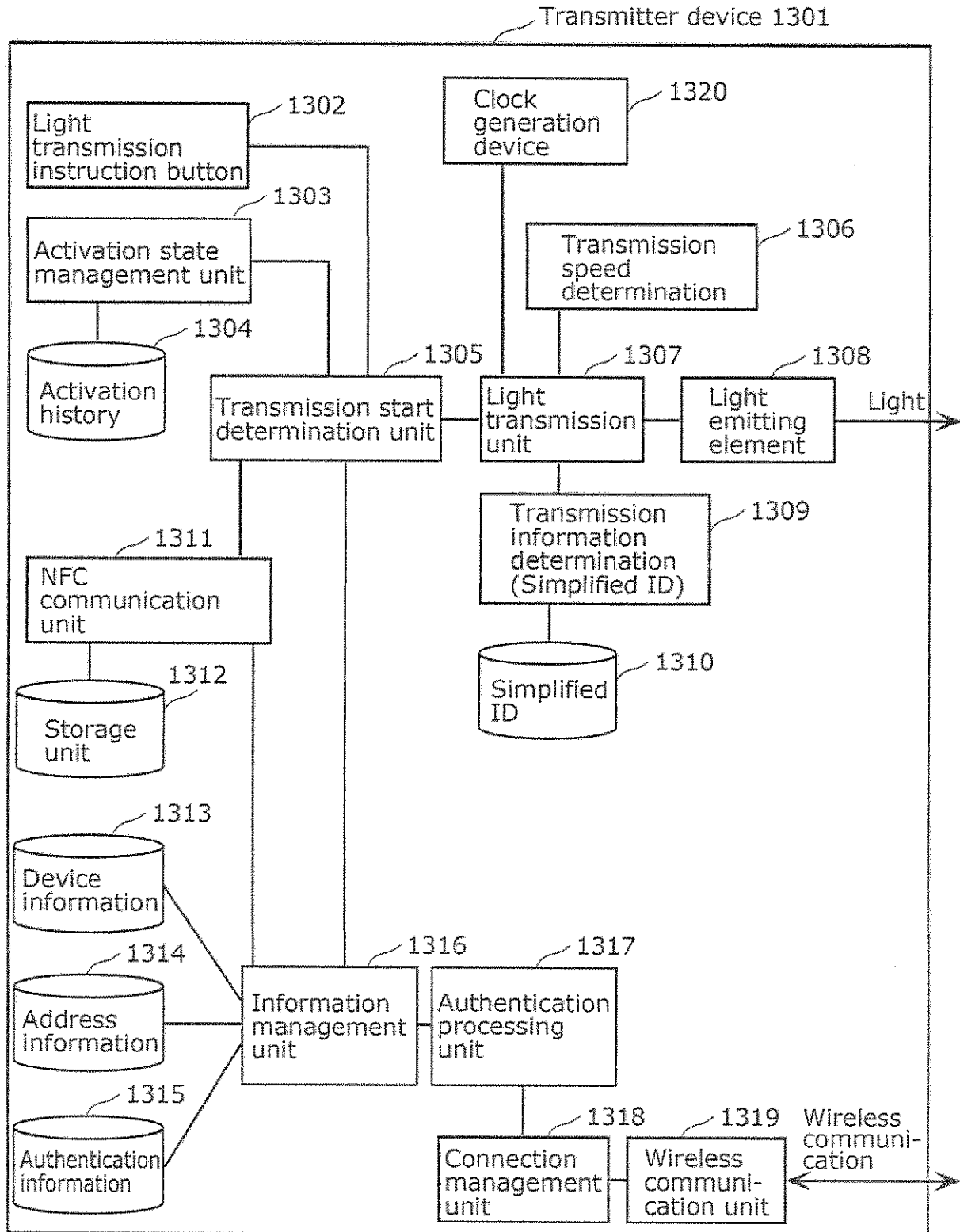


FIG. 4

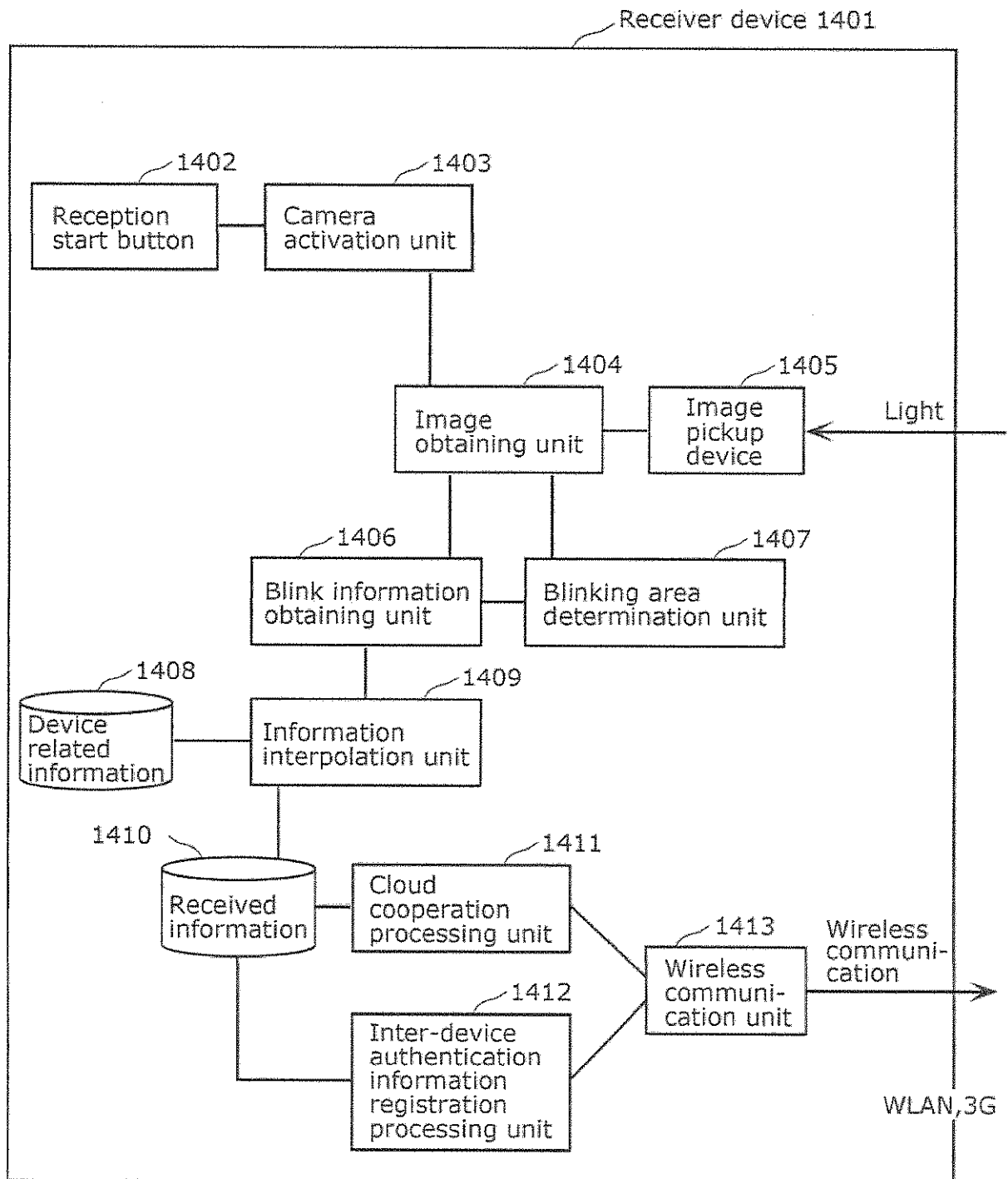


FIG. 5

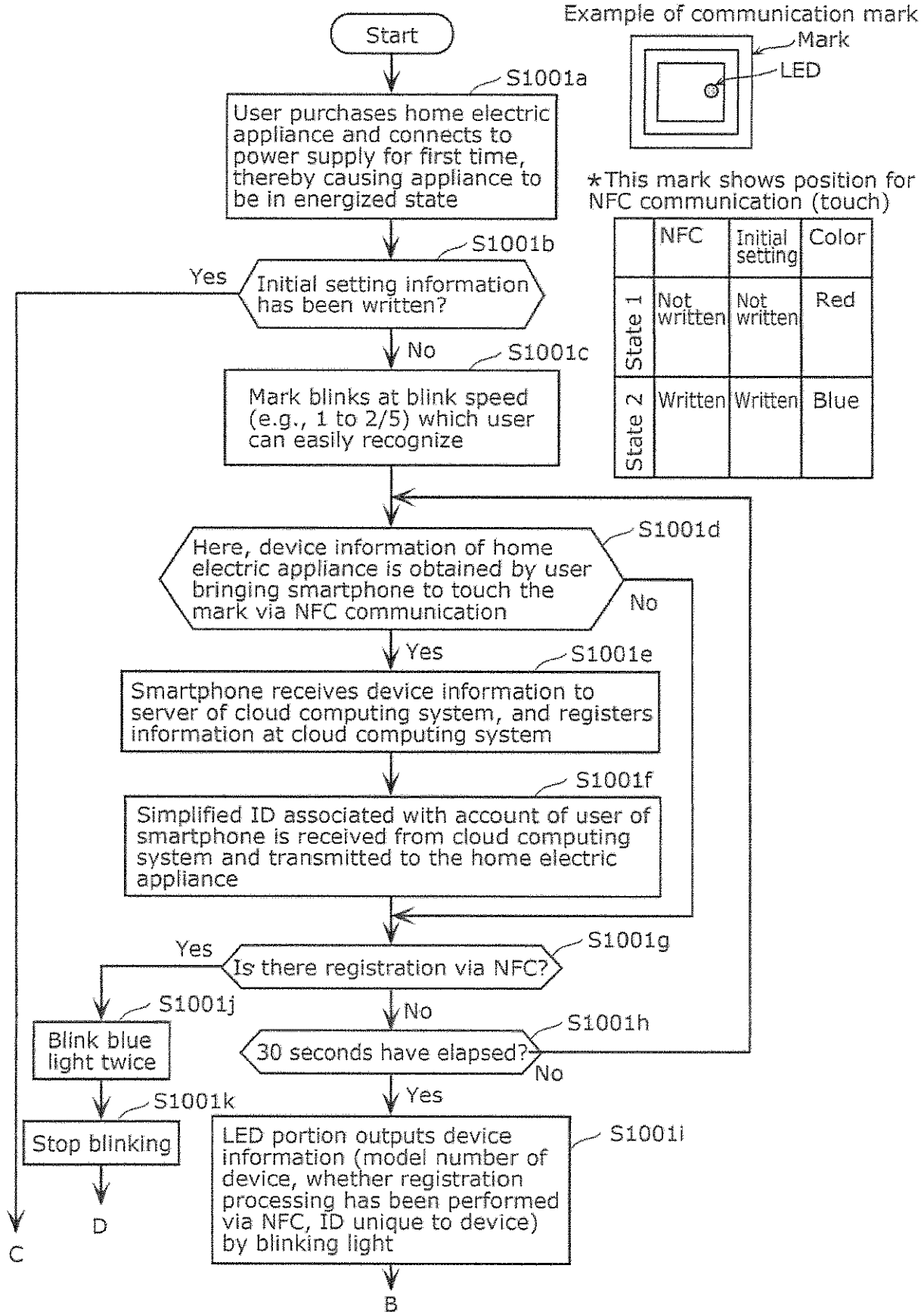


FIG. 6

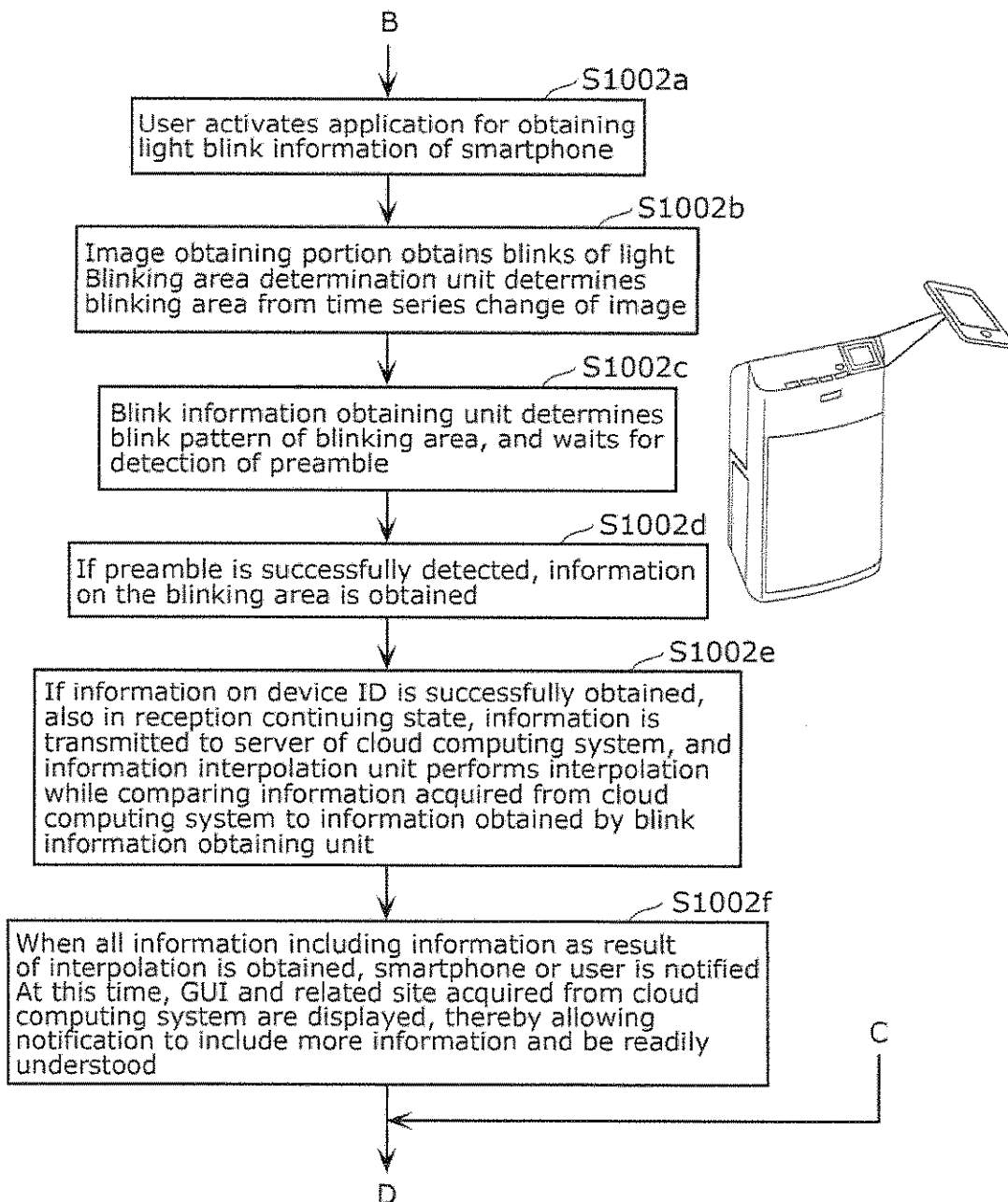
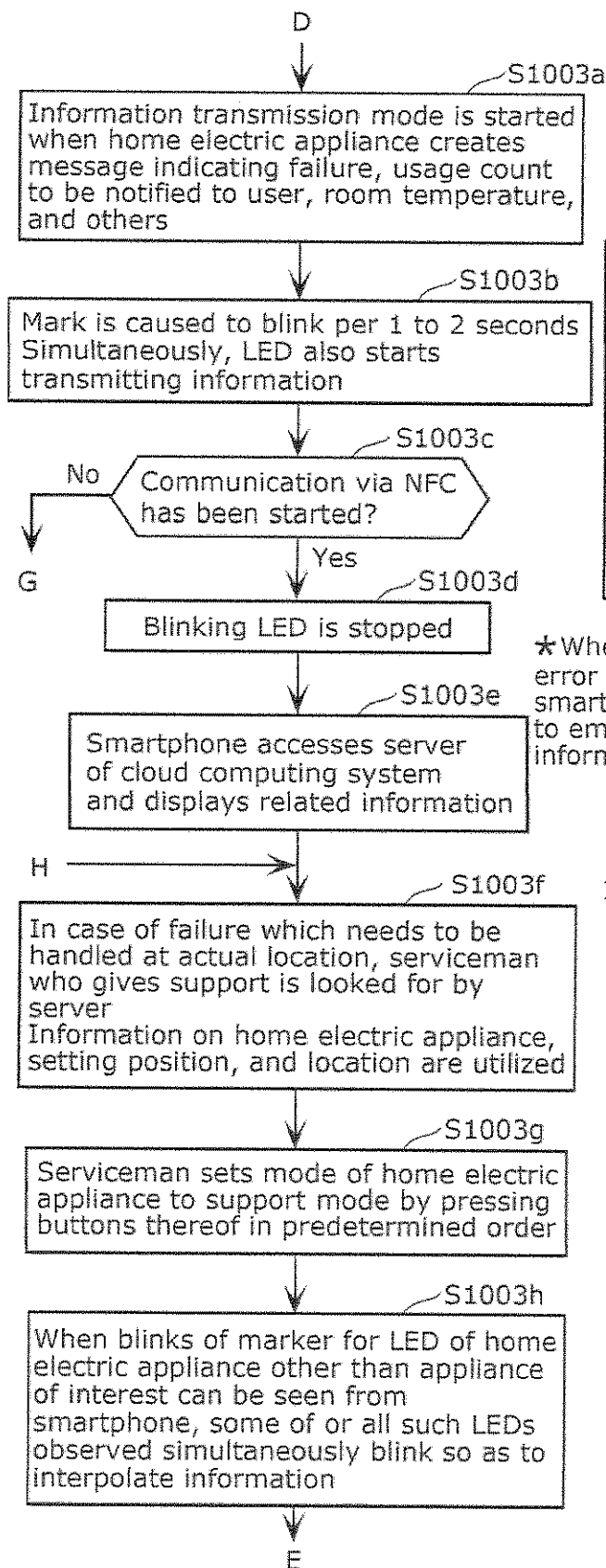


FIG. 7



Example of data to be transmitted

Mode				Information
Serviceman mode NFC	Serviceman mode Light	NFC	Light	Device information for notification code
			User operation information	
		Internal sensor information		

*When mark and LED blink simultaneously, error in obtaining information by camera of smartphone can be reduced by causing mark to emit light during intervals of successive information transmissions by LED

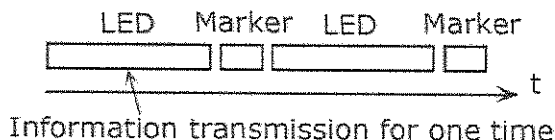


FIG. 8

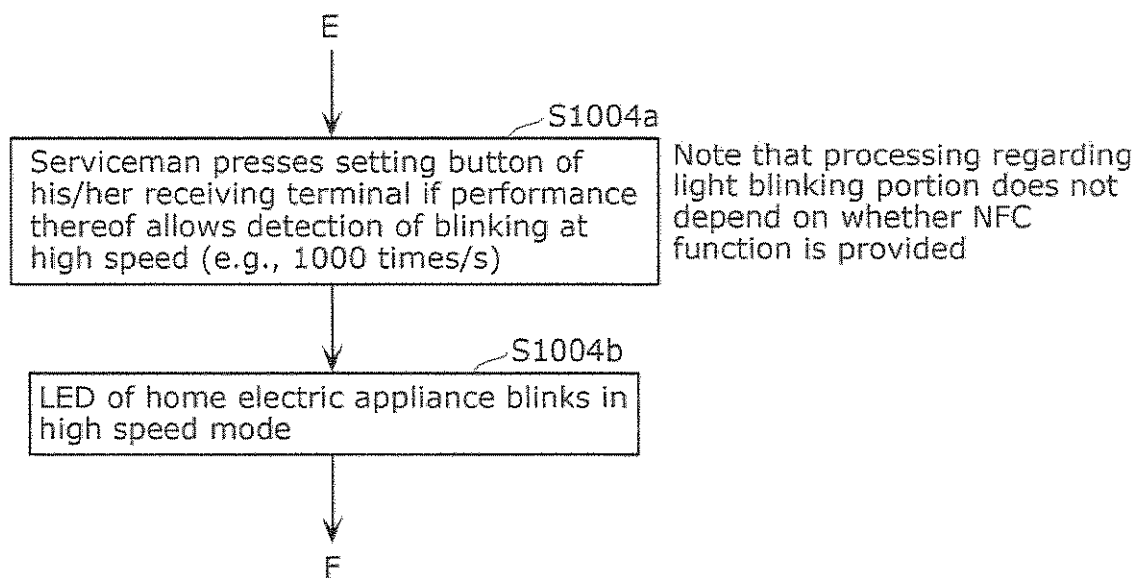


FIG. 9

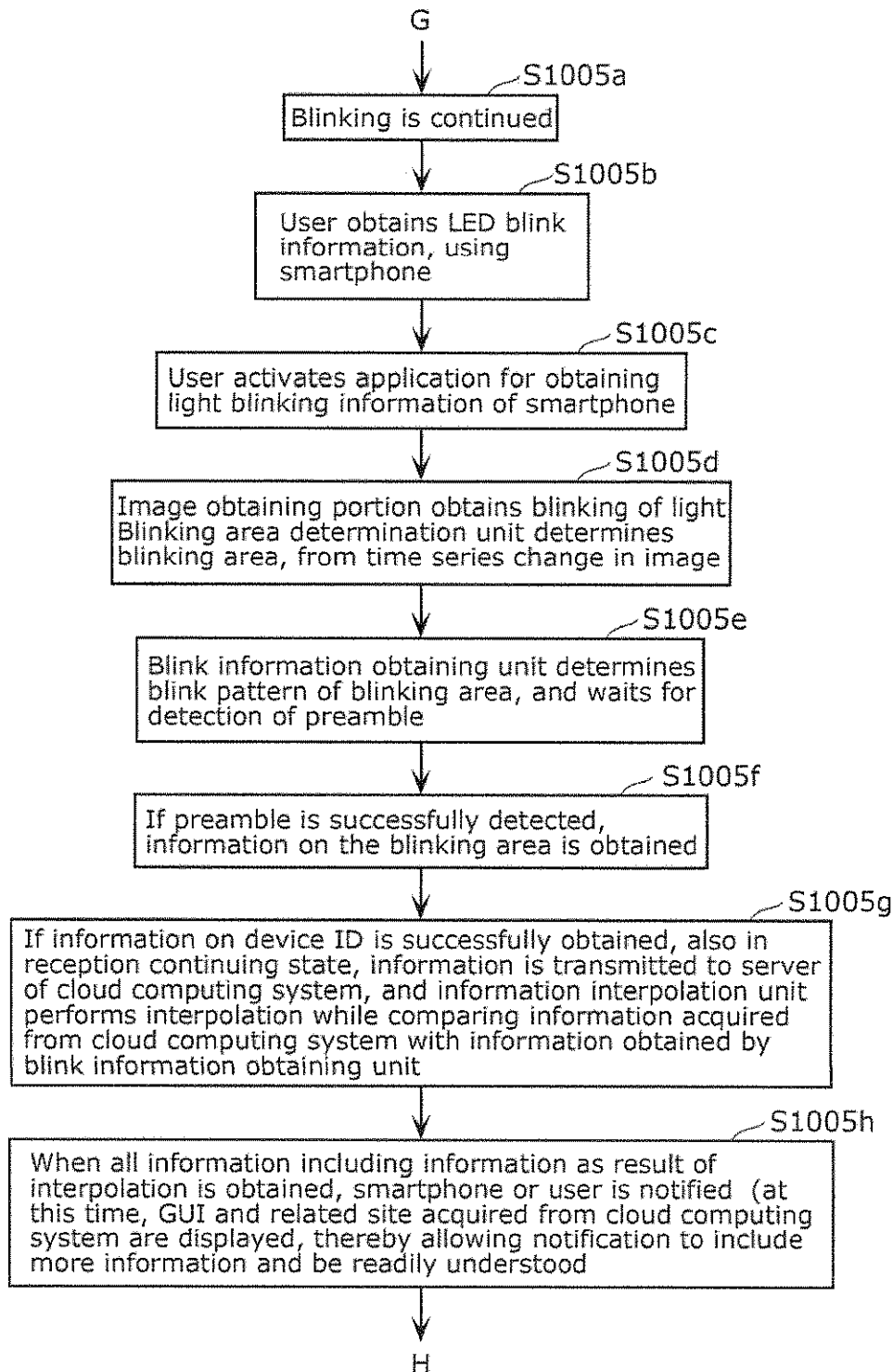


FIG. 10

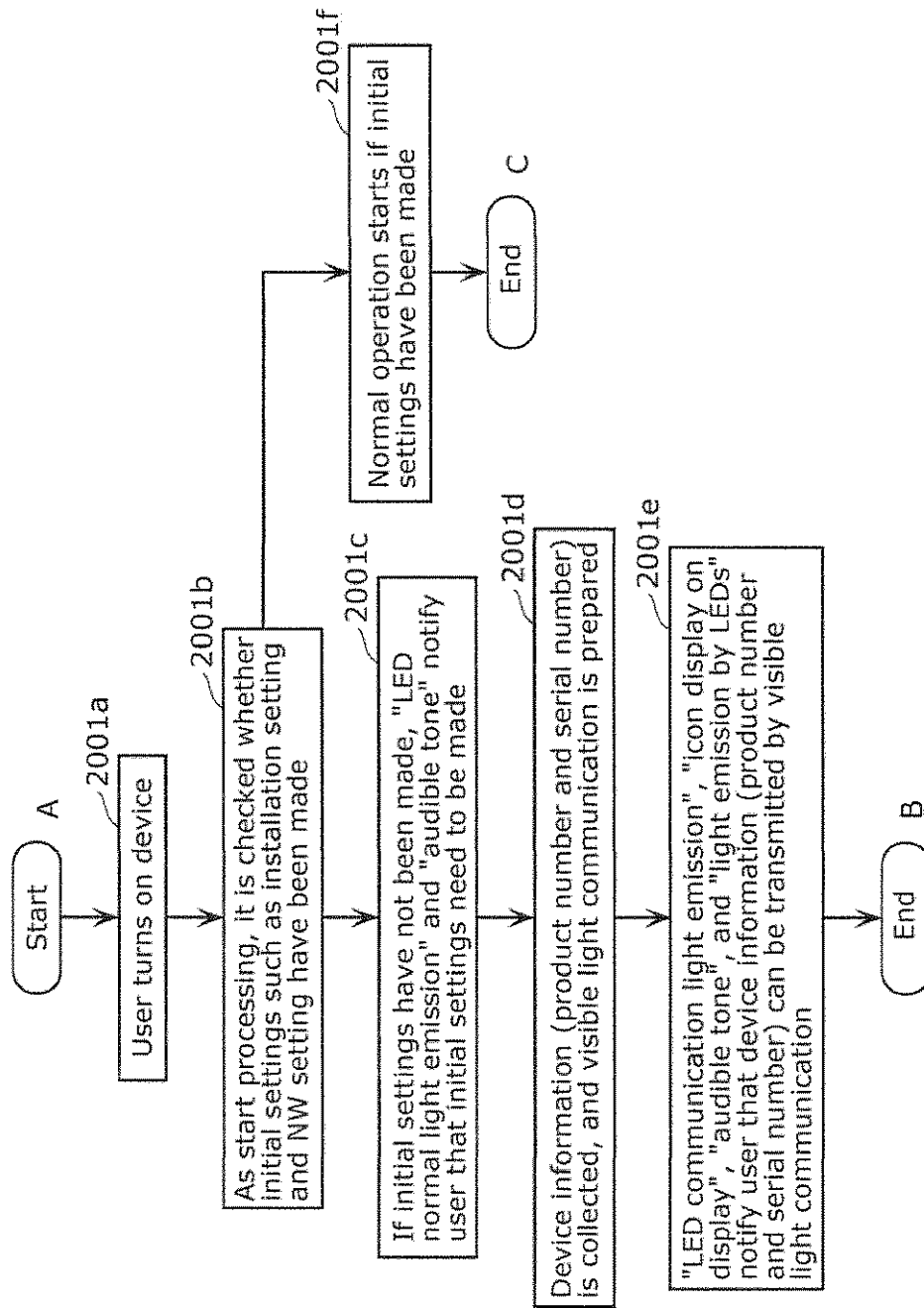


FIG. 11

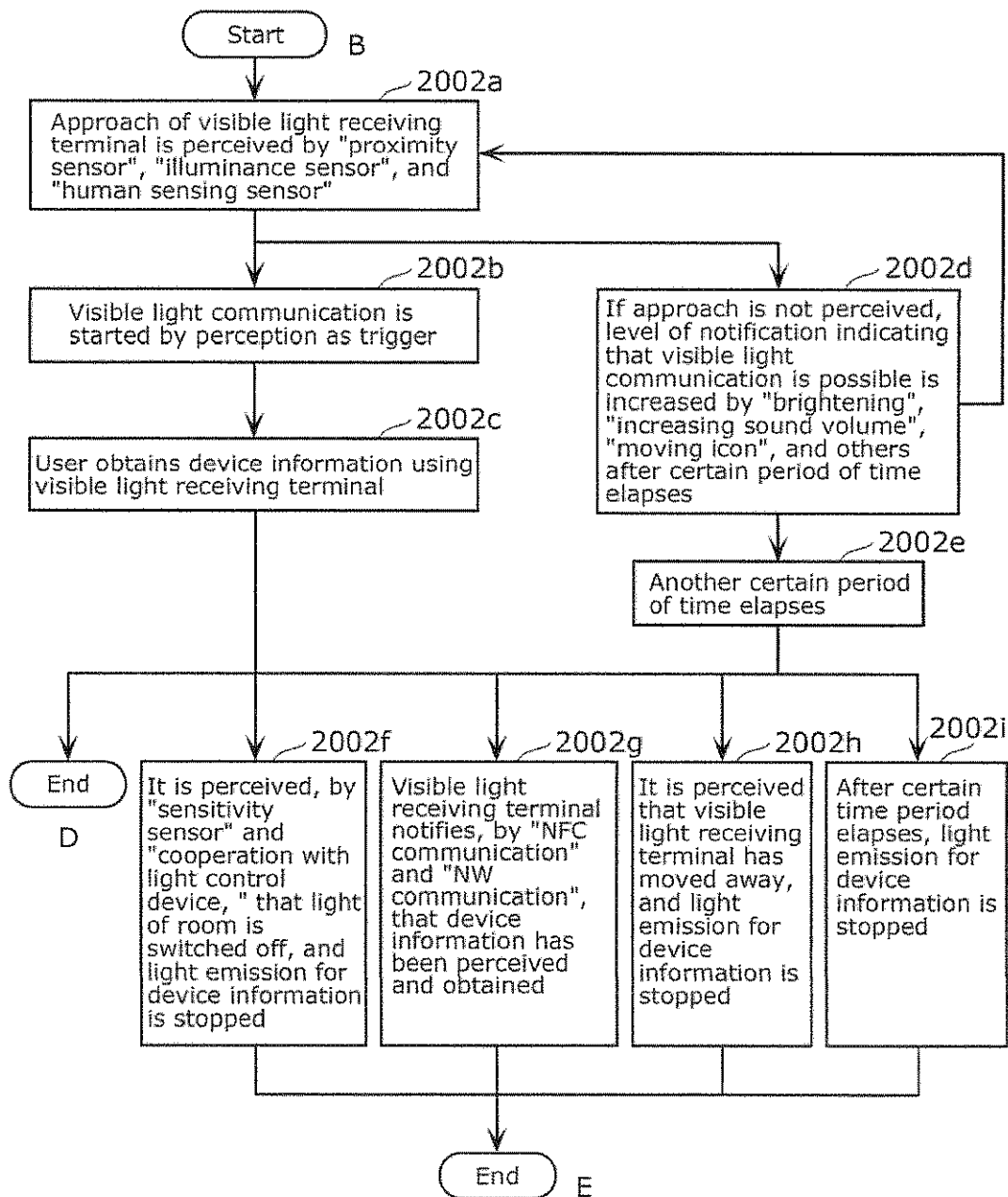


FIG. 12

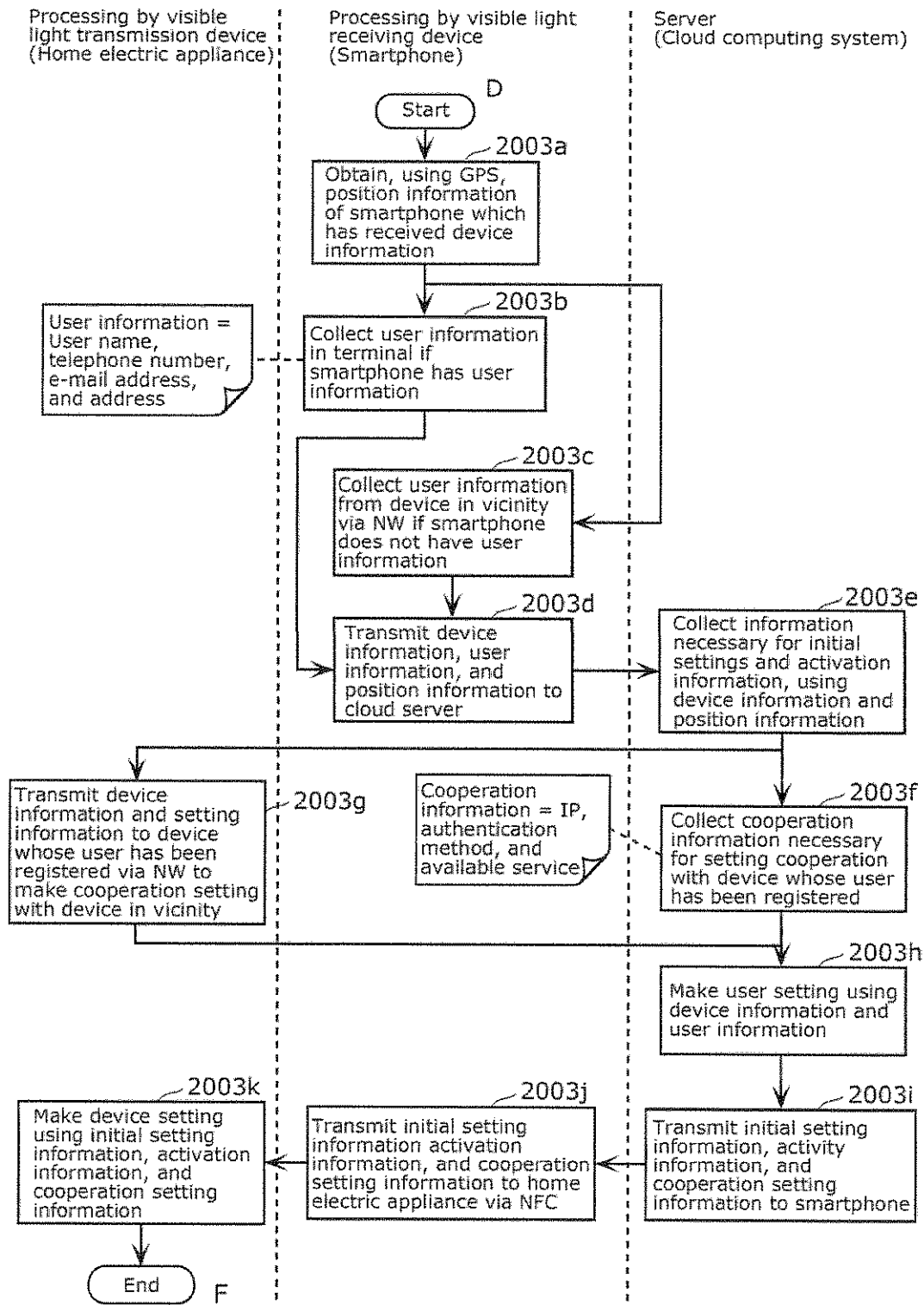


FIG. 13

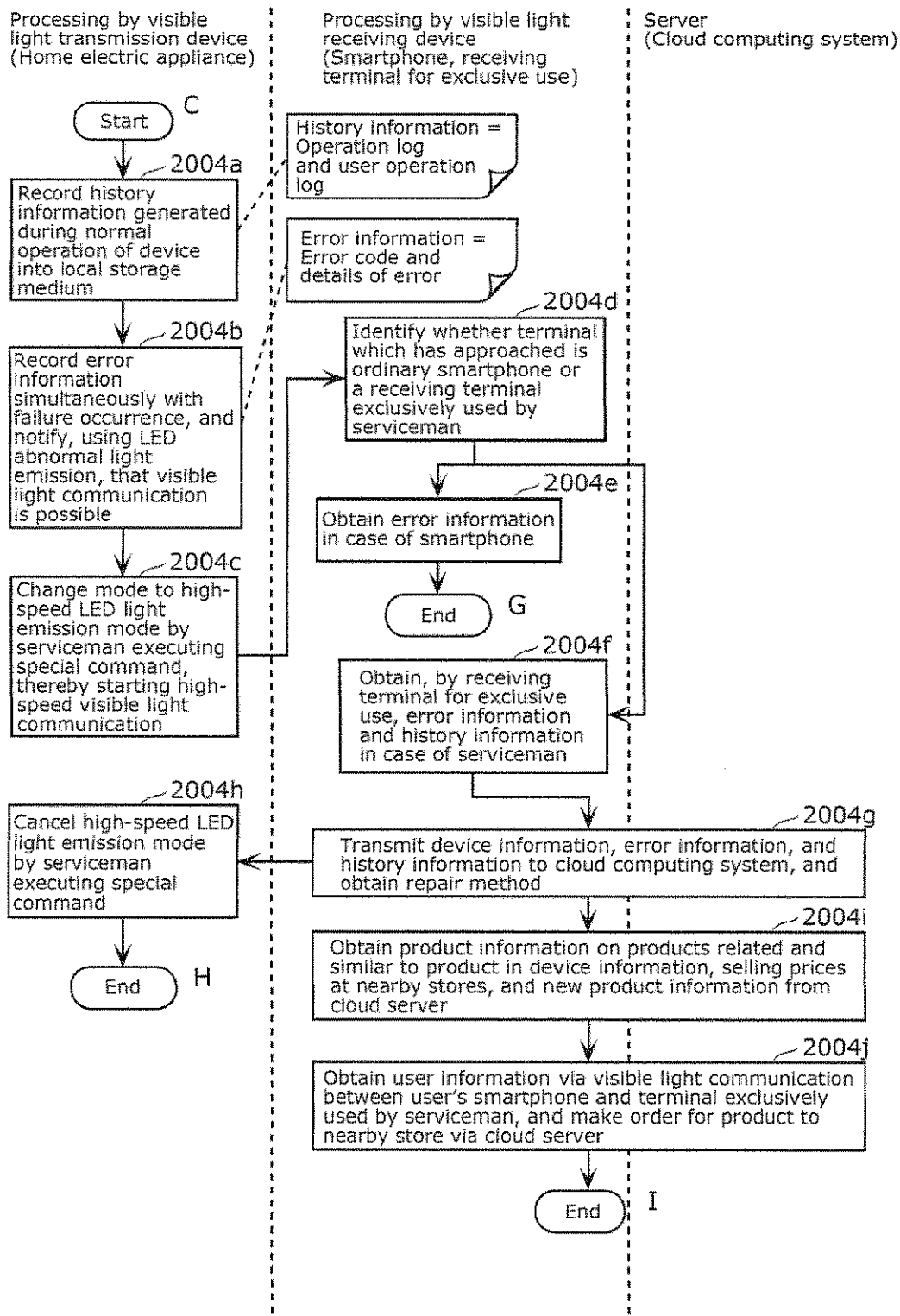


FIG. 14

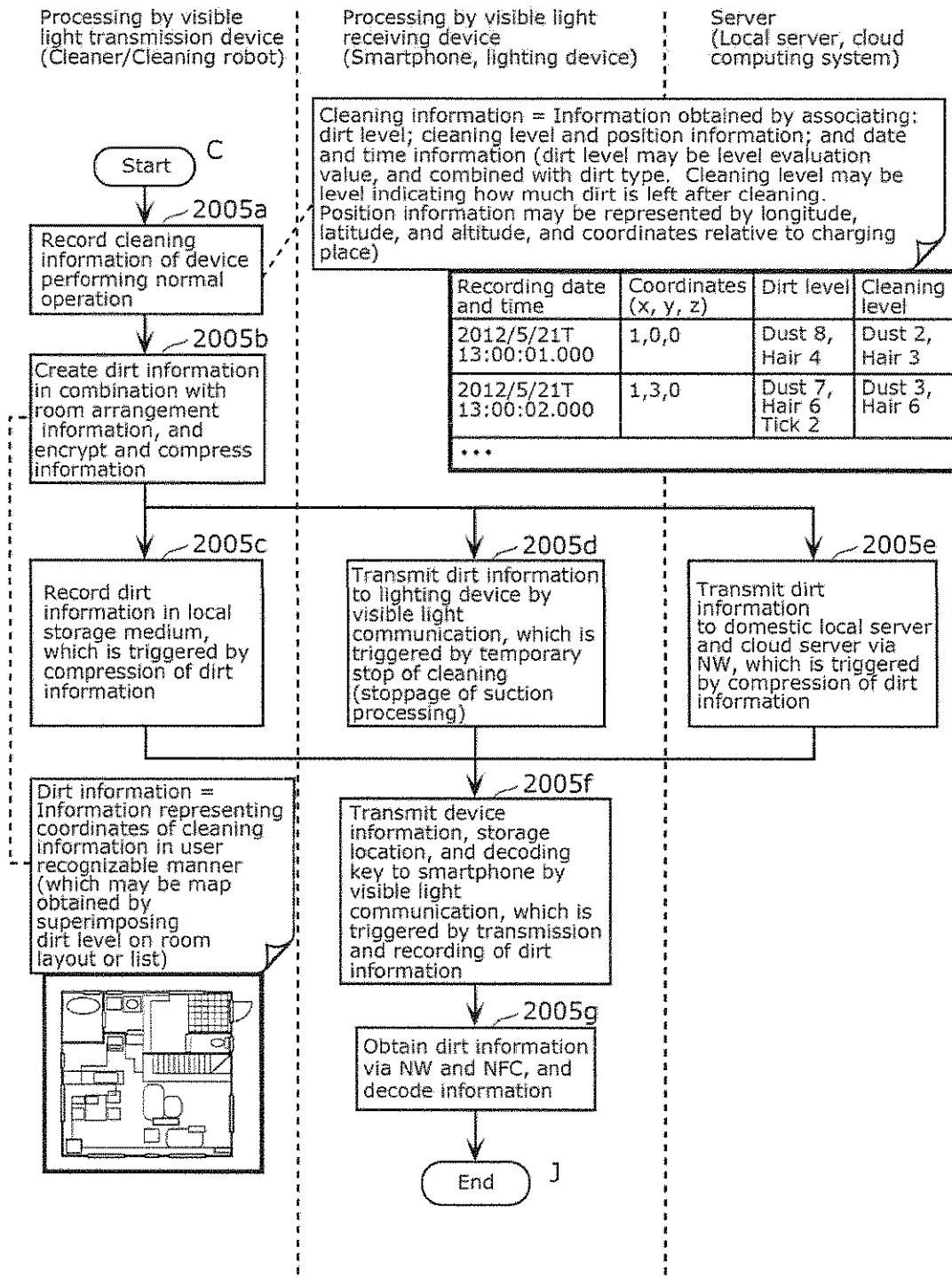


FIG. 15

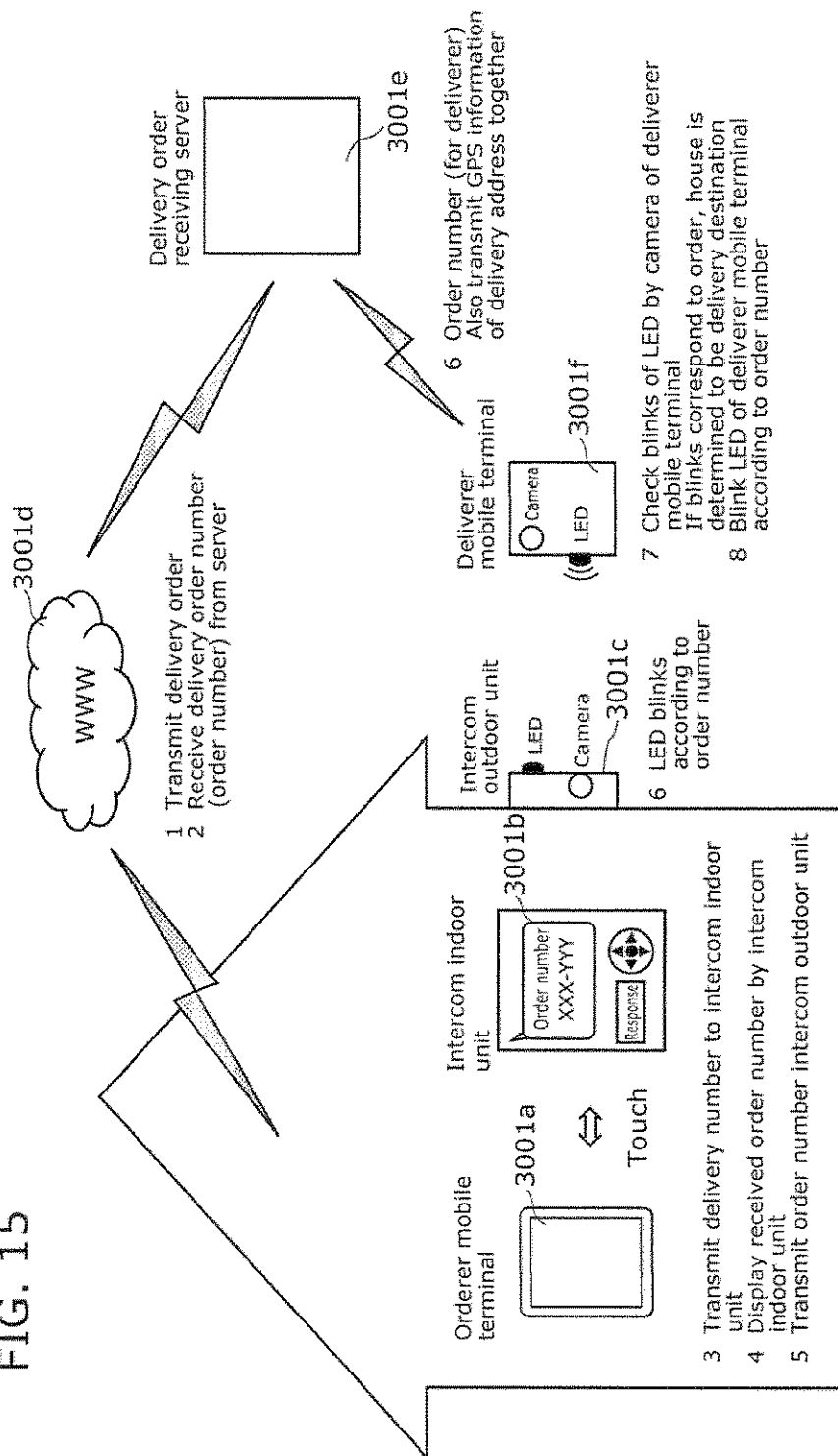


FIG. 16

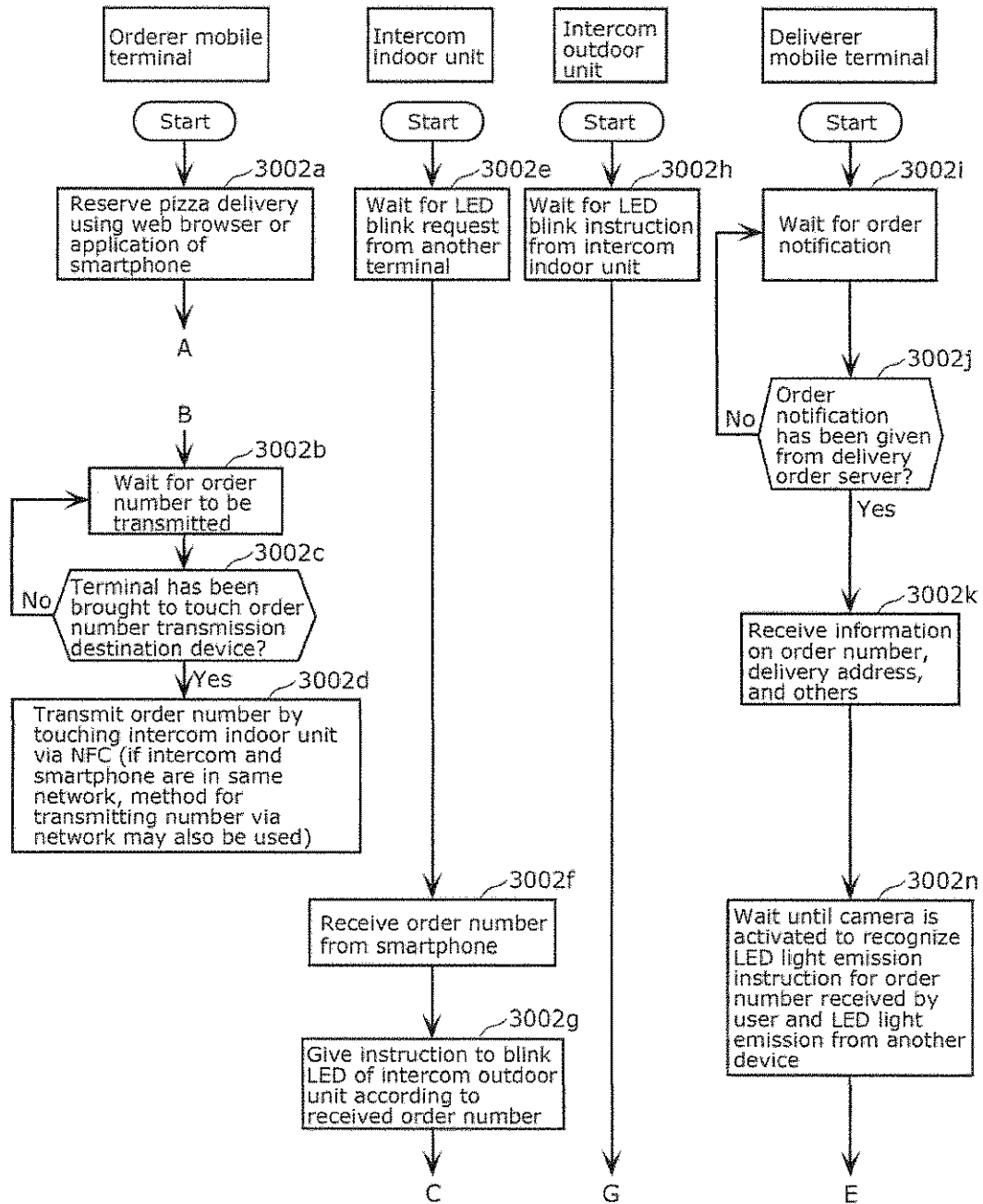


FIG. 17

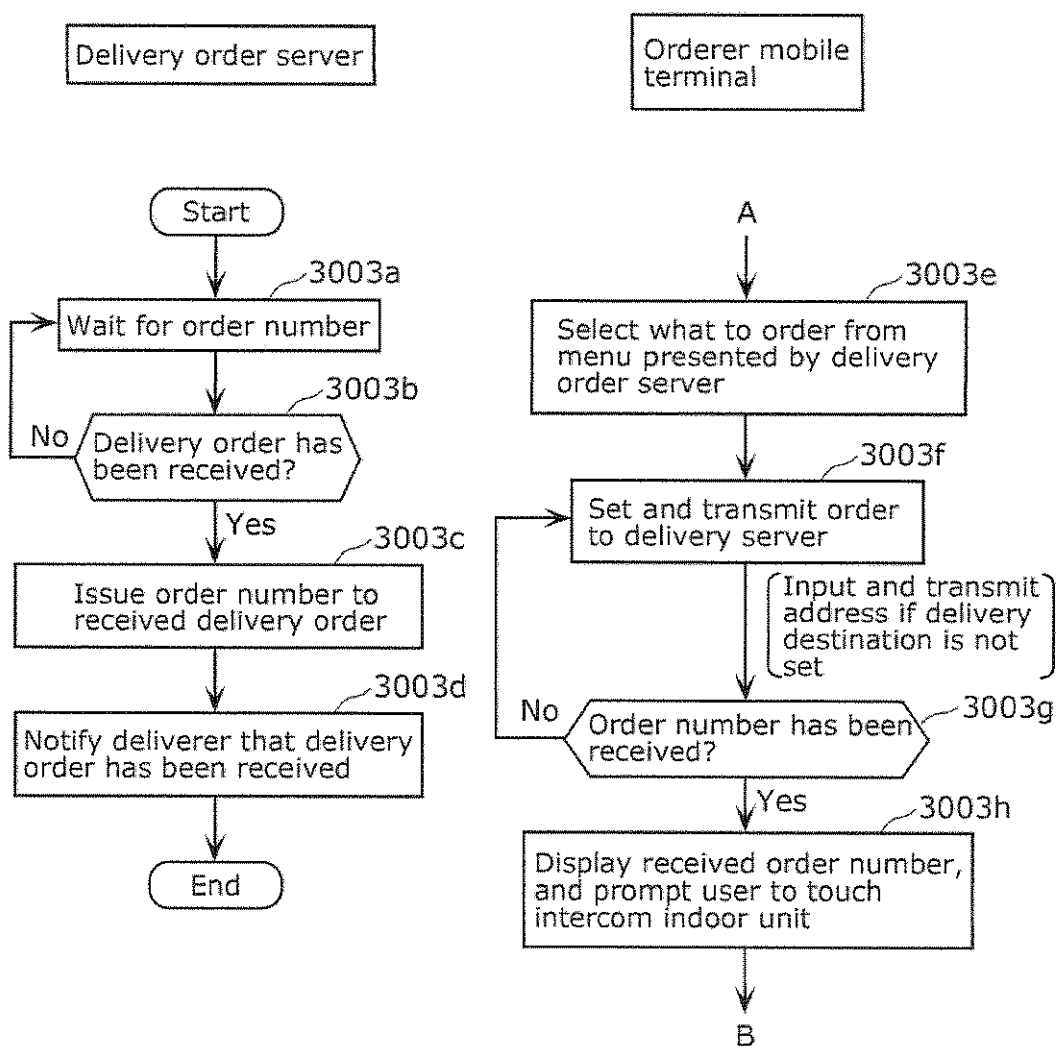


FIG. 18

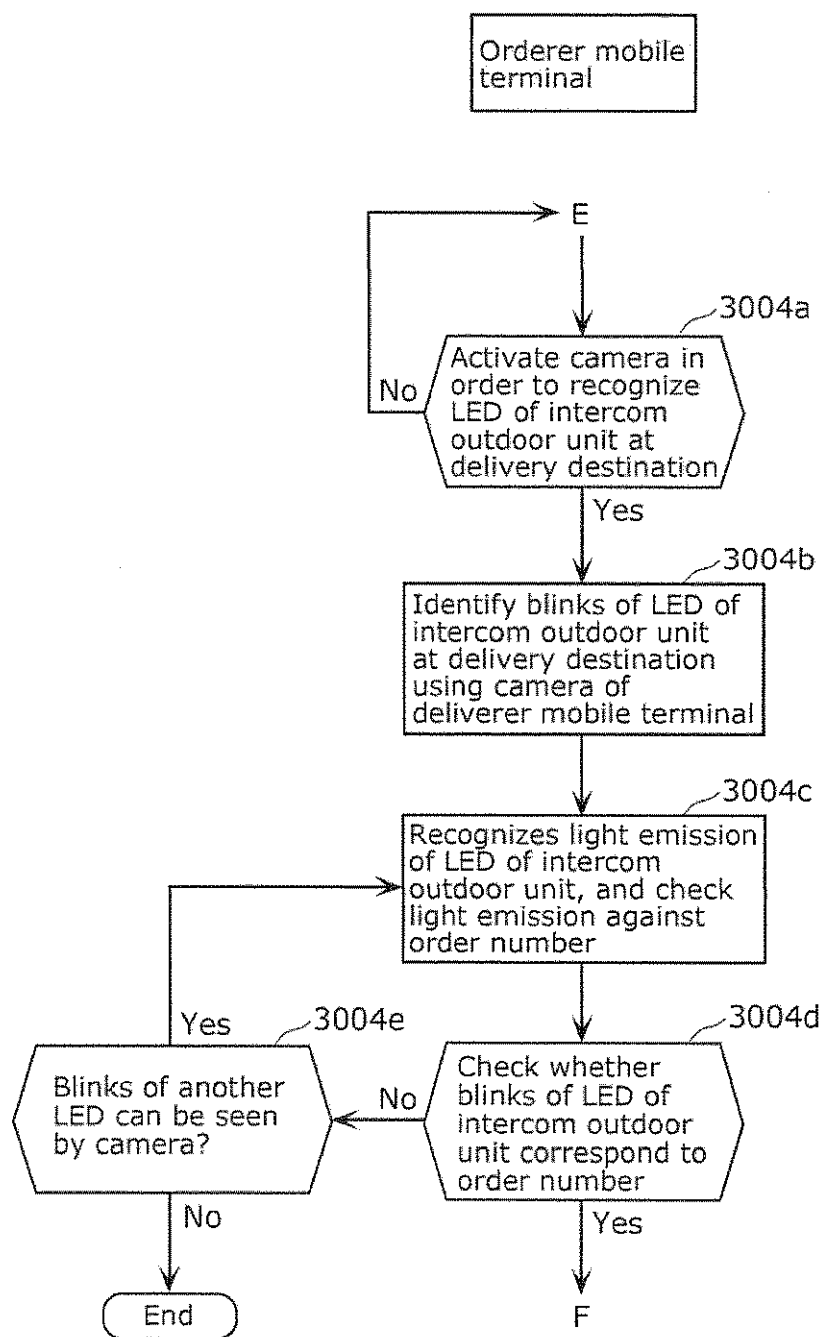


FIG. 19

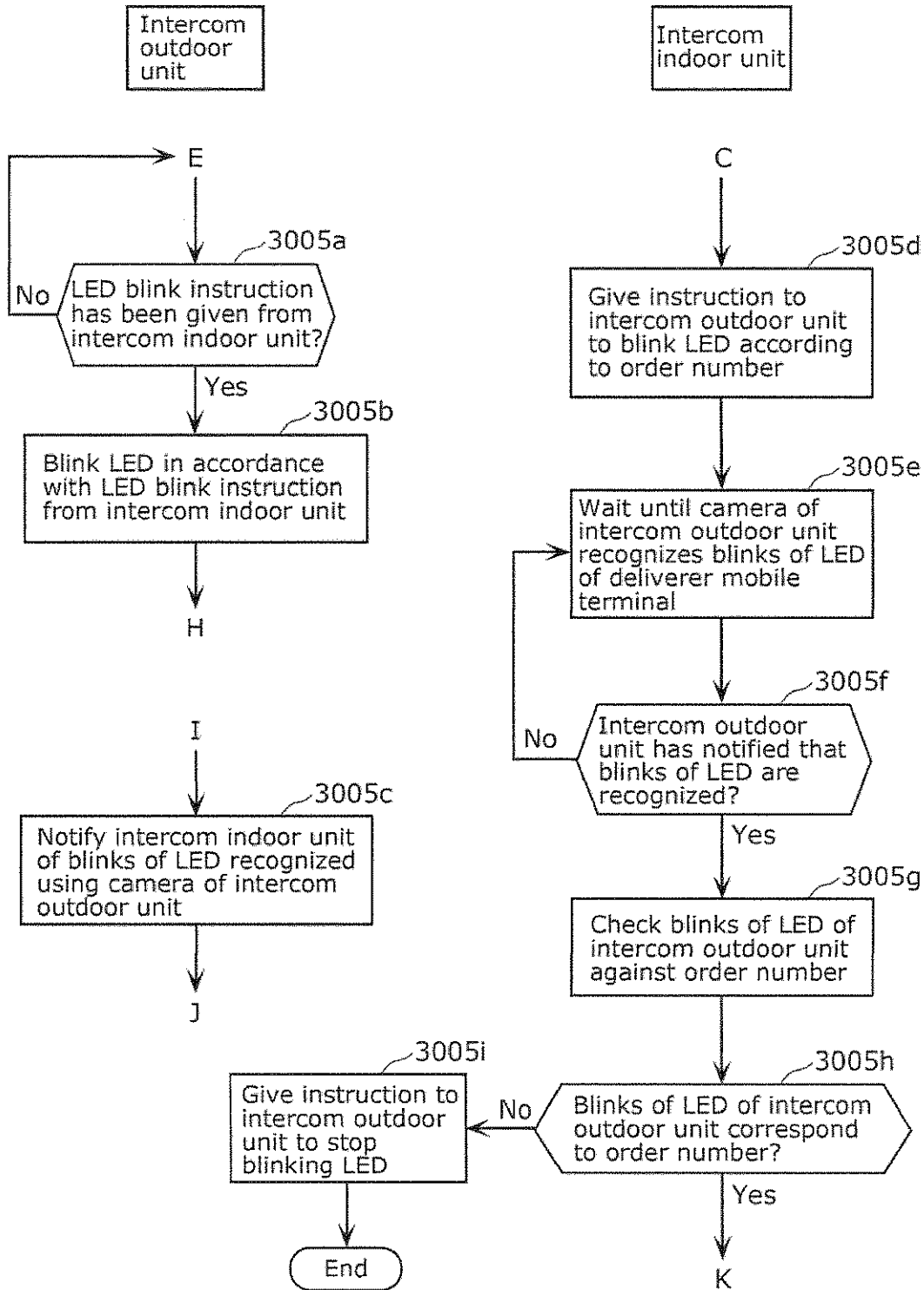


FIG. 20

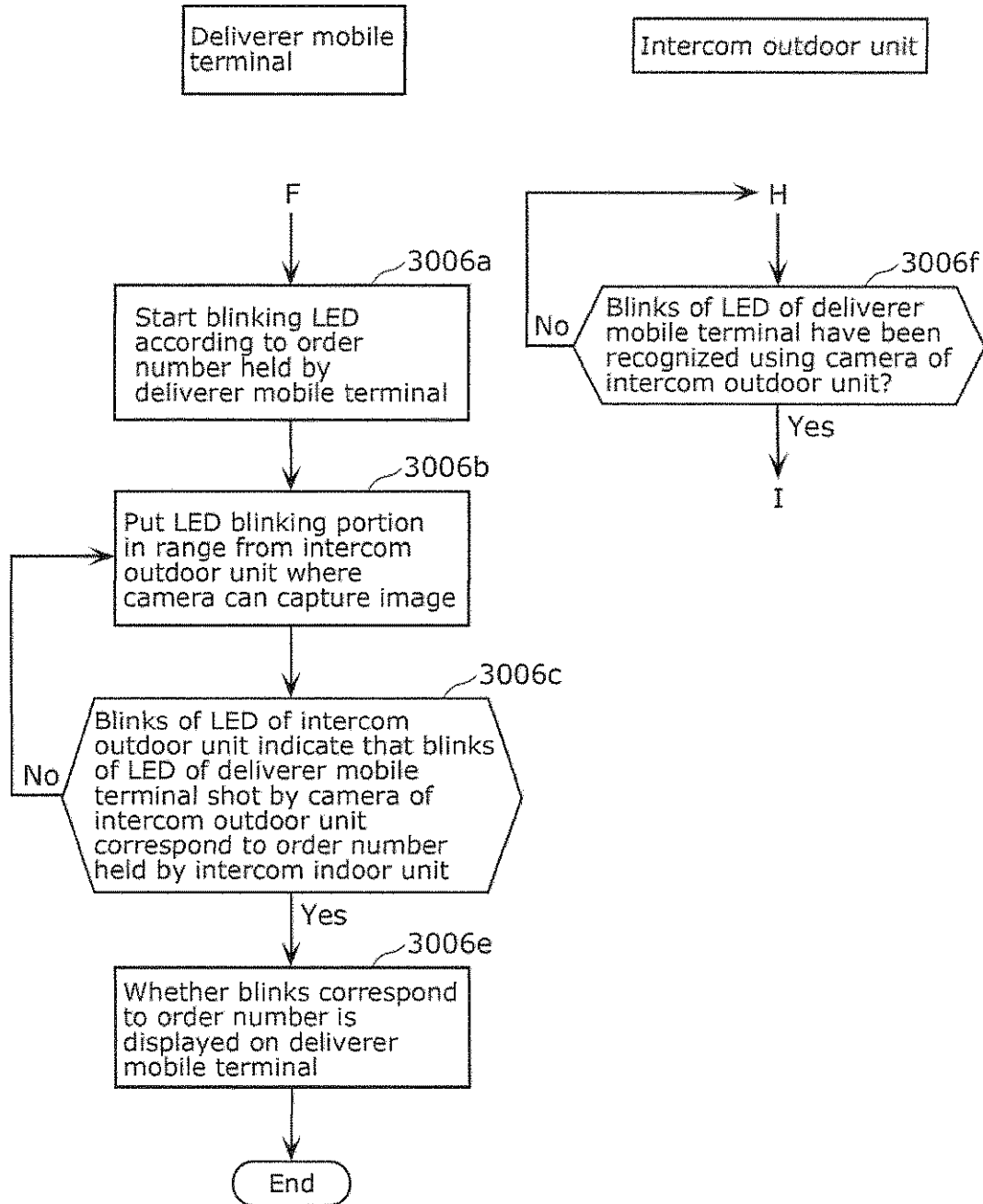


FIG. 21

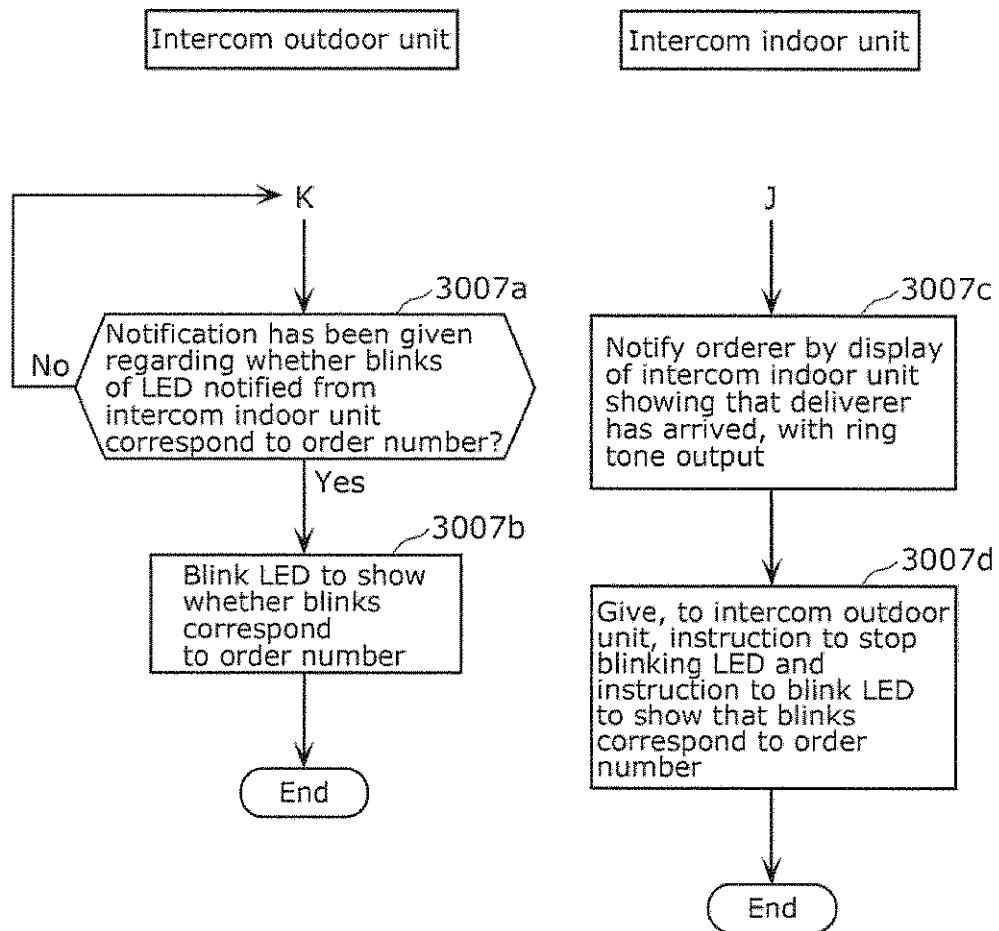


FIG. 22

Register user and mobile phone in use to server

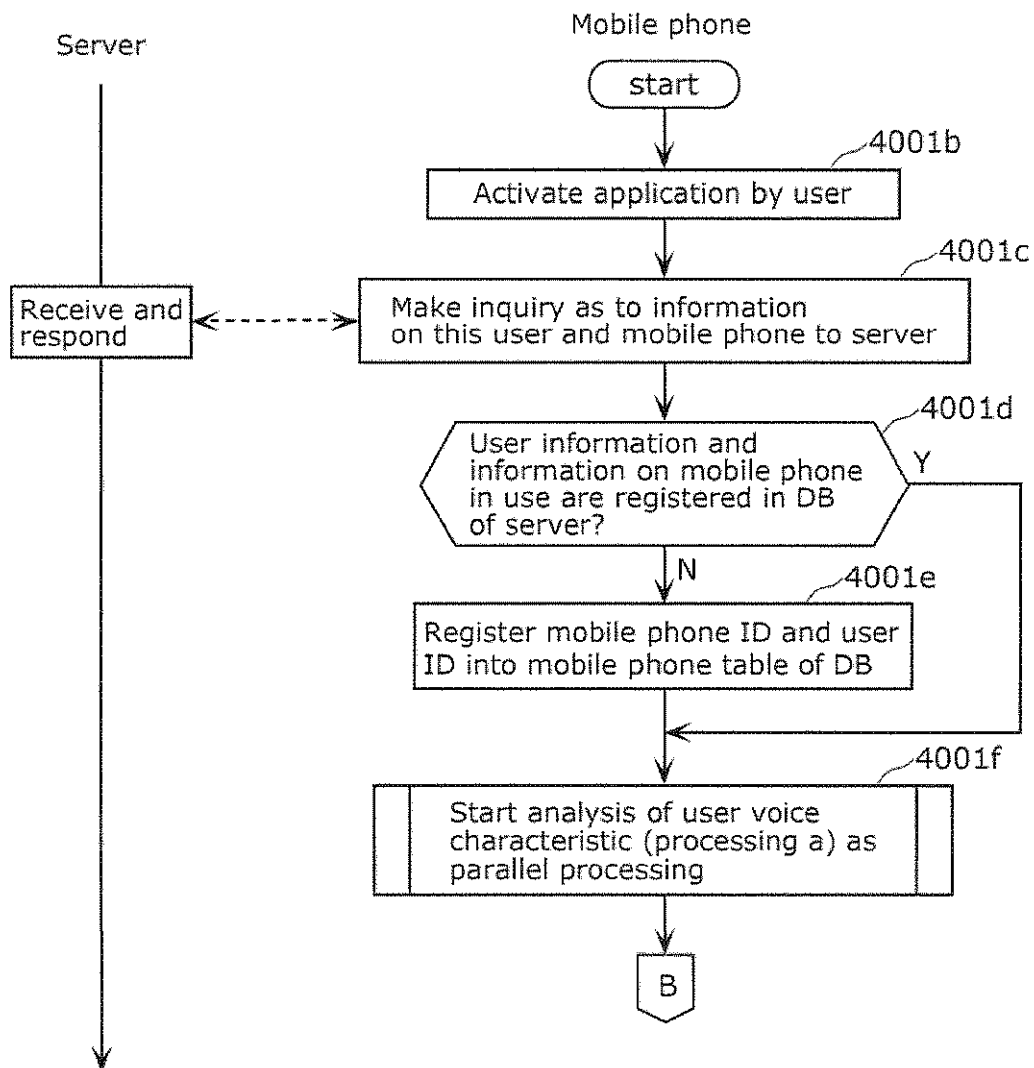


FIG. 23

(Processing a) Analyze user voice characteristics

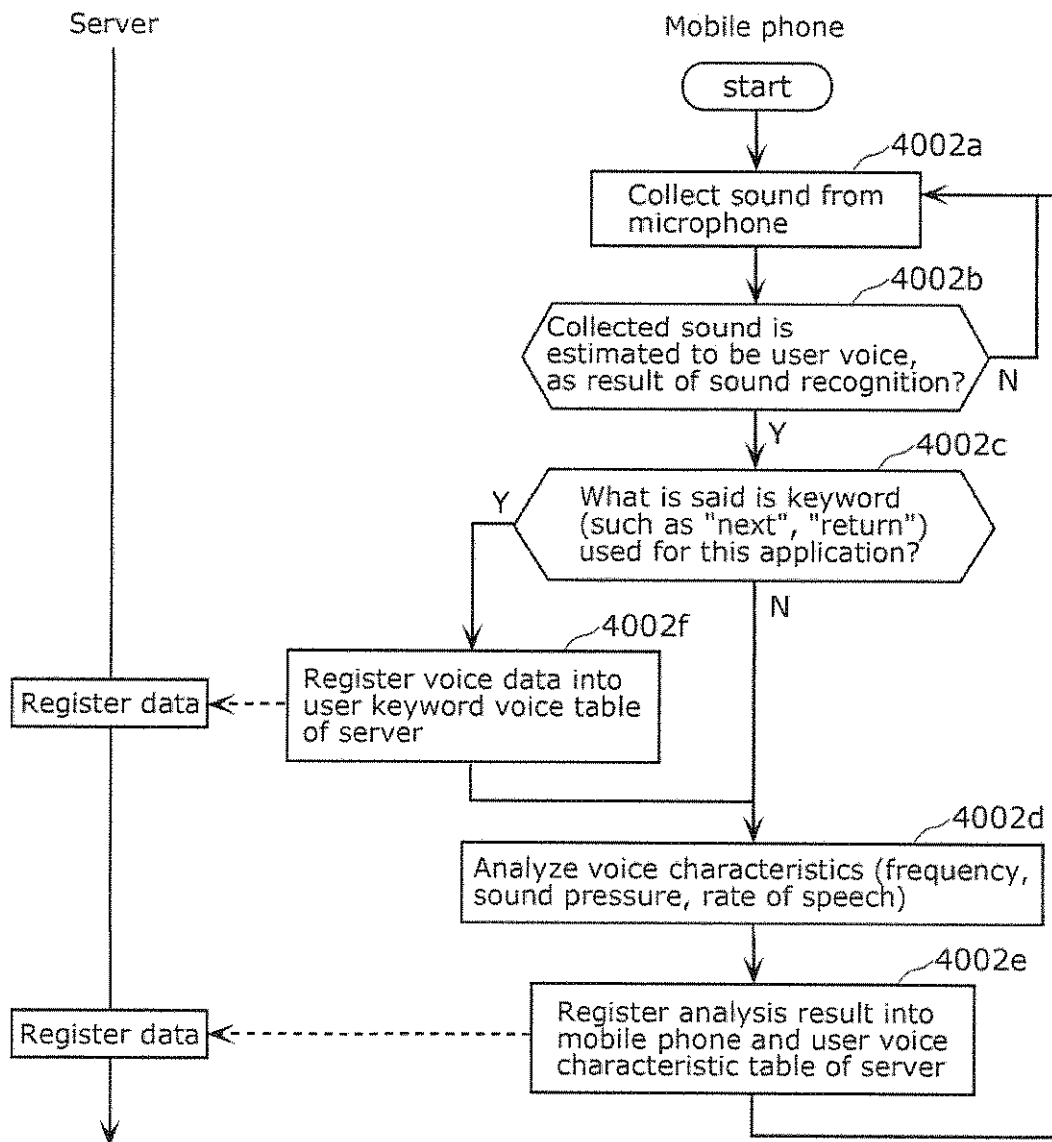


FIG. 24

Prepare sound recognition processing

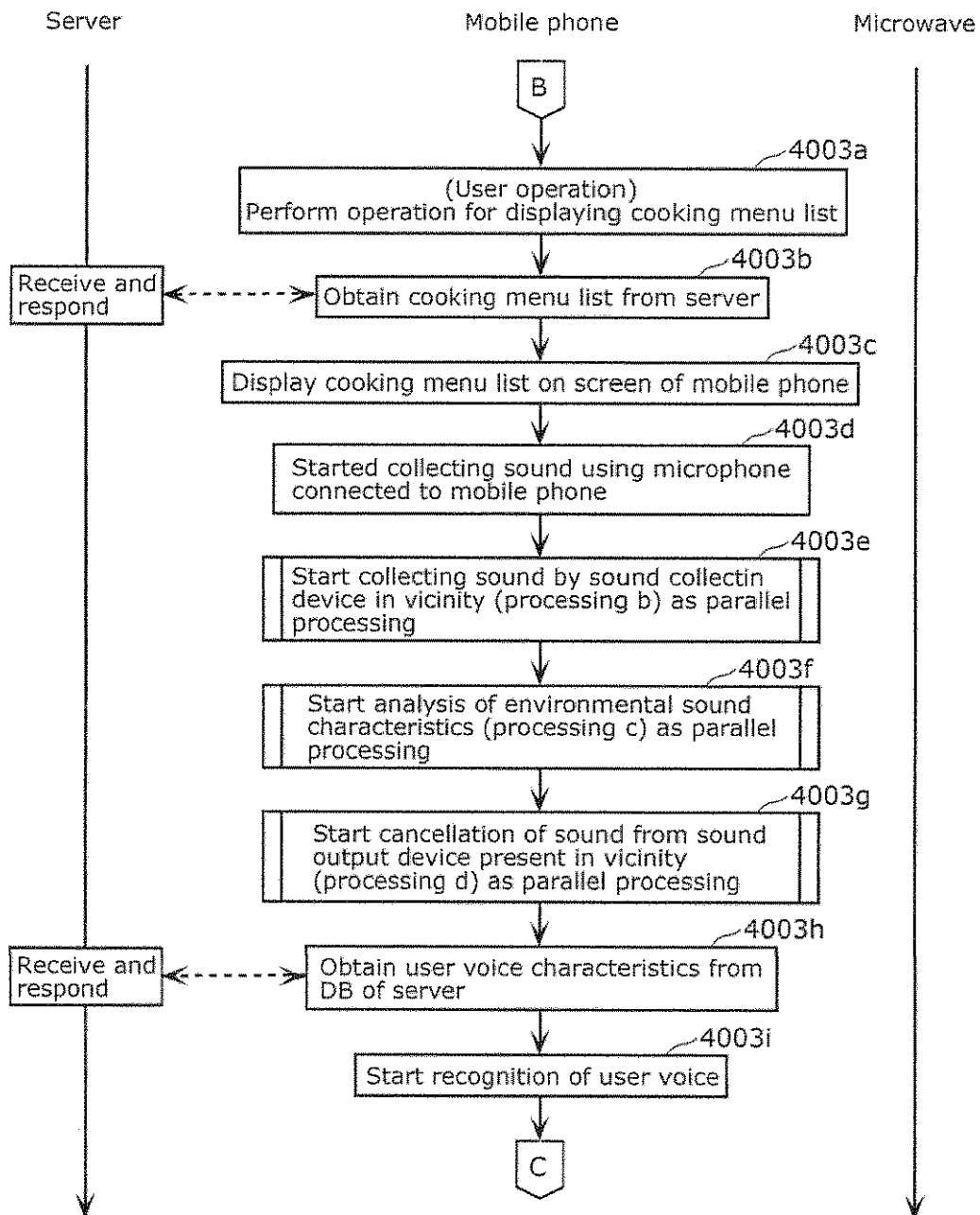


FIG. 25

(Processing b) Collect sound by sound collecting device in vicinity

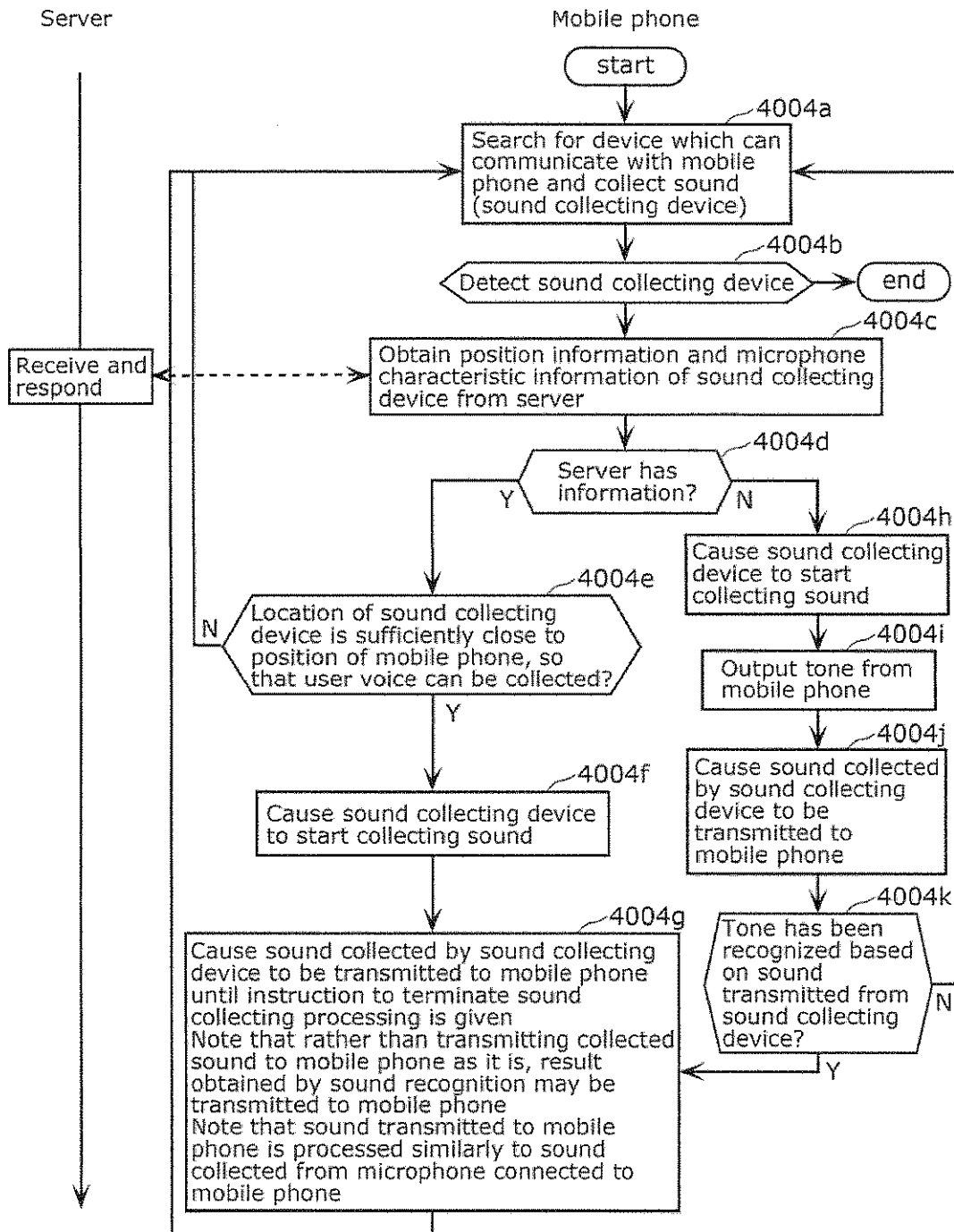


FIG. 26

(Processing c) Analyze environmental sound characteristics

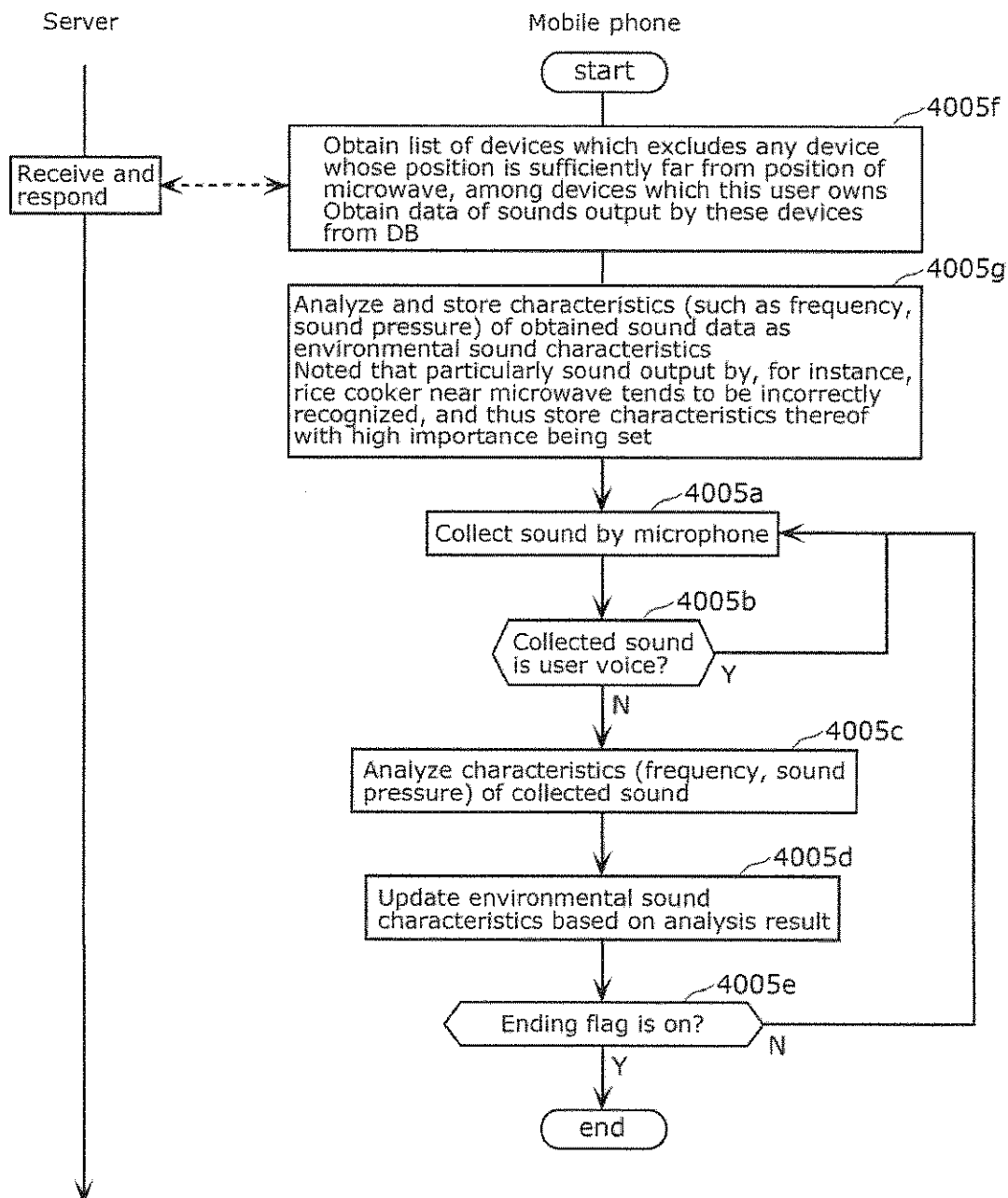


FIG. 27

(Processing d) Cancel sound from sound output device present in vicinity

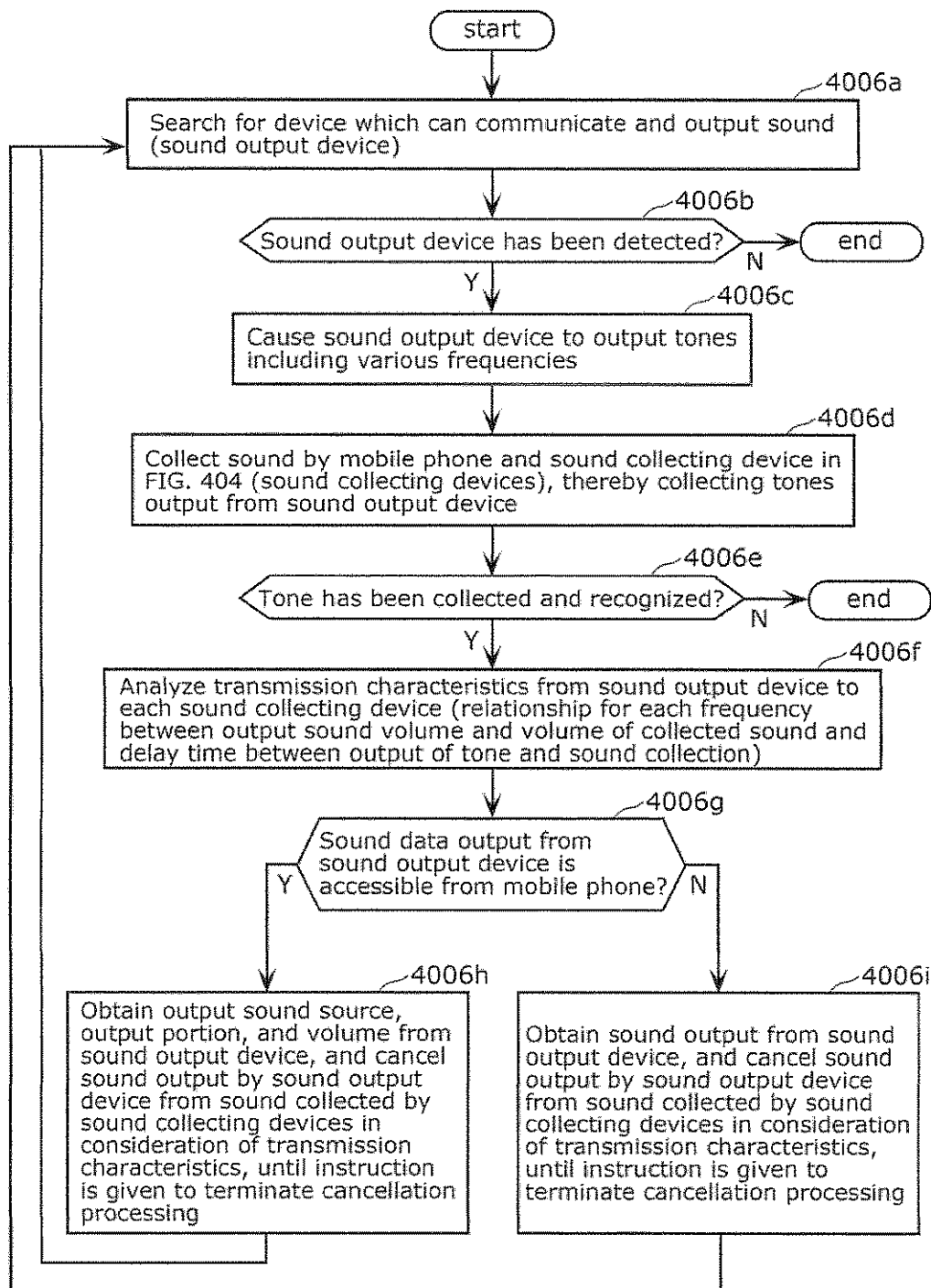


FIG. 28

Select what to cook, and set detailed operation in microwave

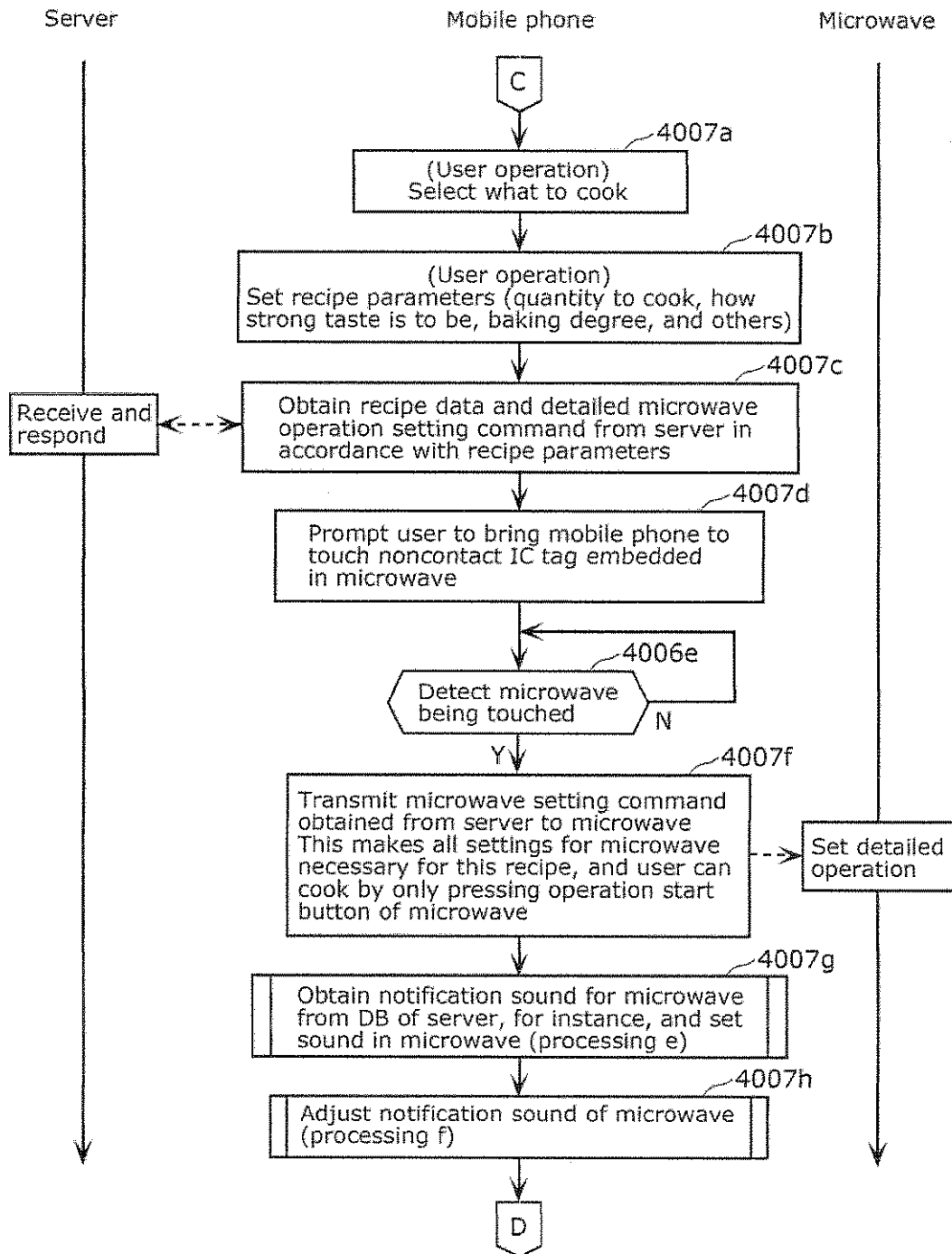


FIG. 29

(Processing e) Obtain notification sound for microwave from DB of server, for instance, and set sound in microwave

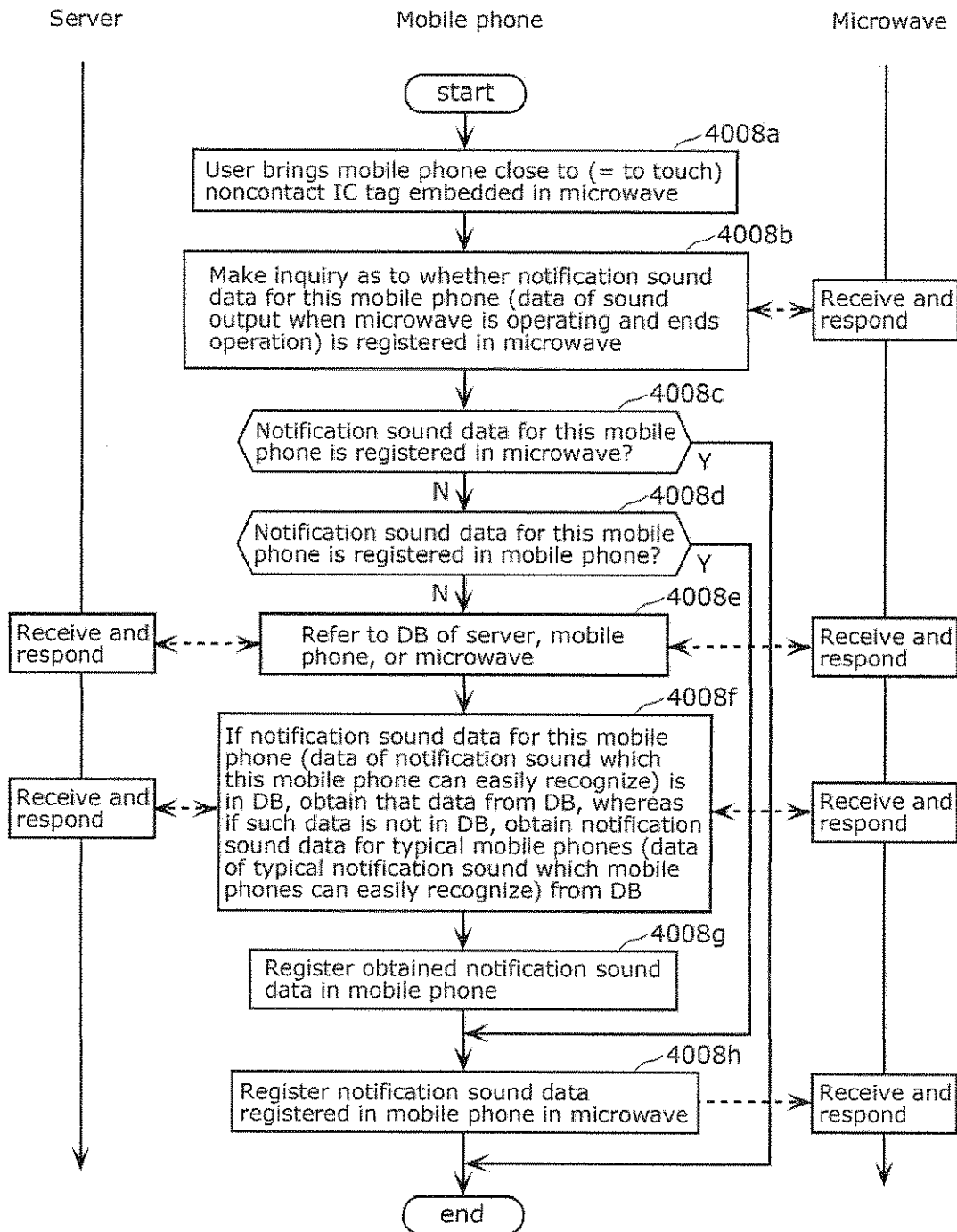


FIG. 30

(Processing f) Adjust notification sound of microwave

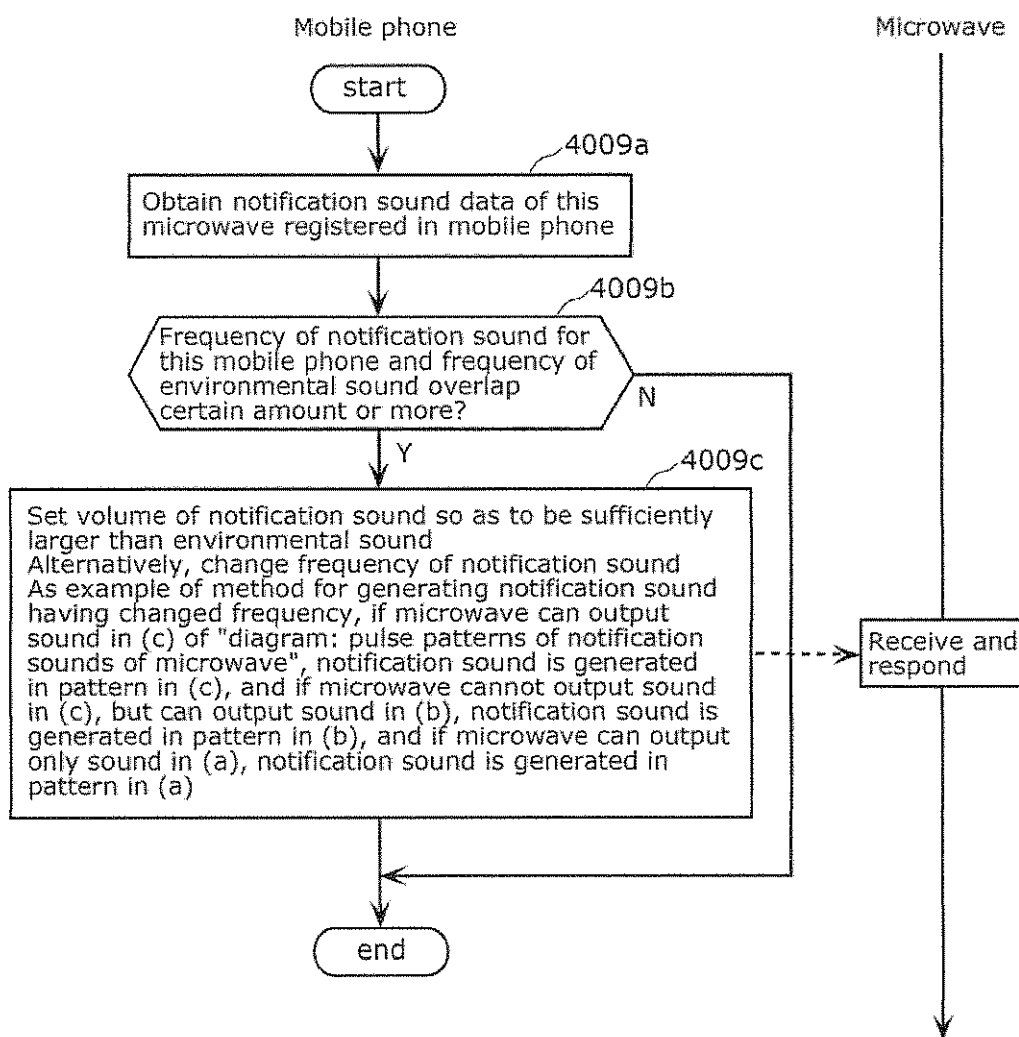


FIG. 31

Diagram: Pulse patterns of notification sounds of microwave

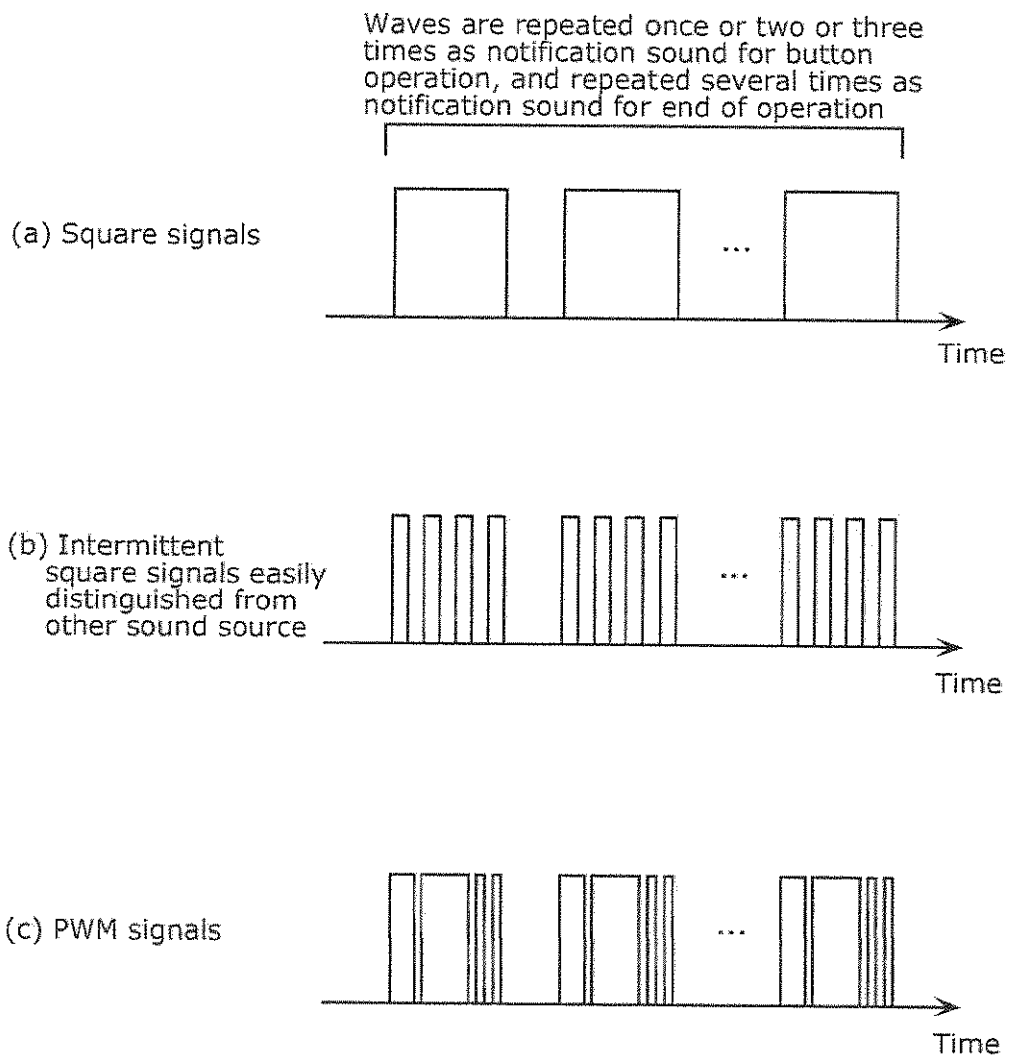


FIG. 32

Display details of cooking

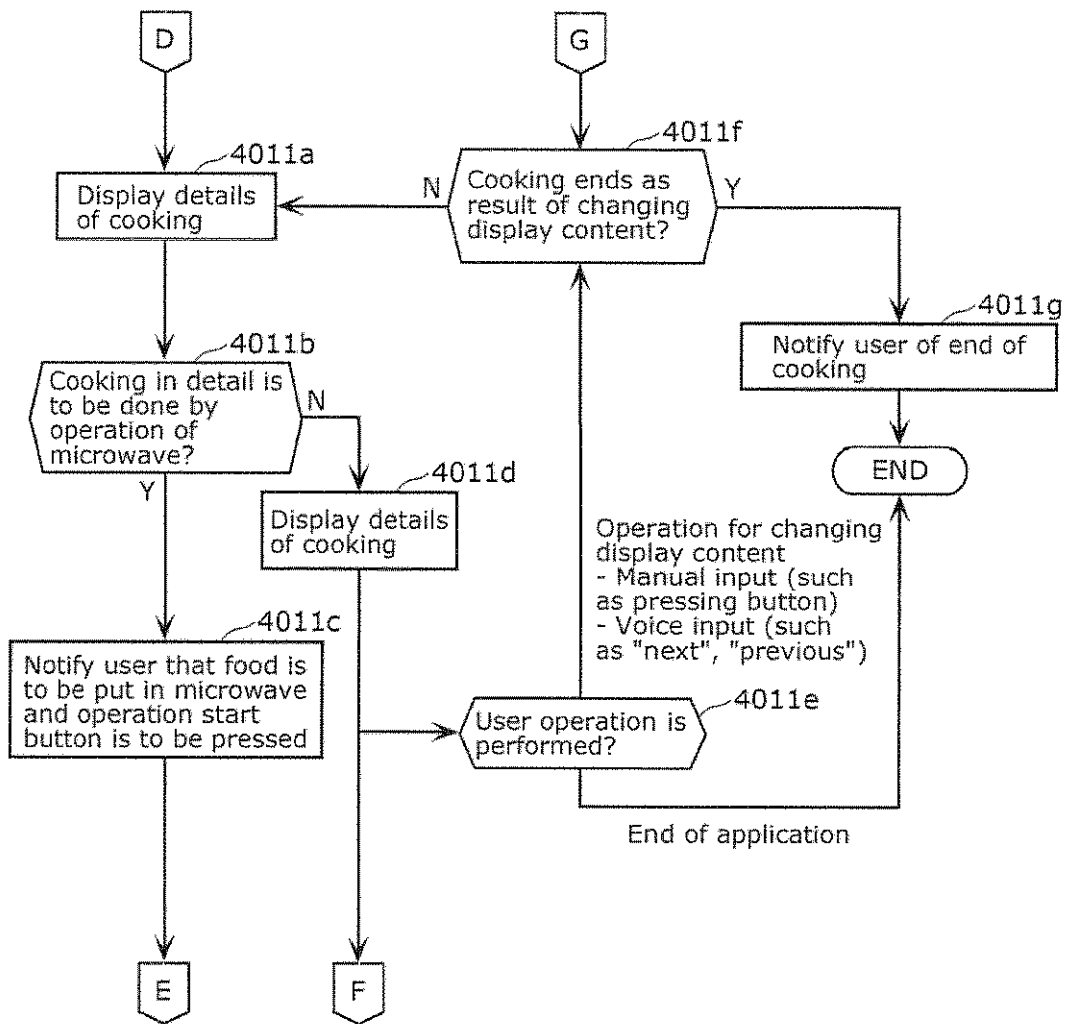


FIG. 33

Recognize notification sound of microwave

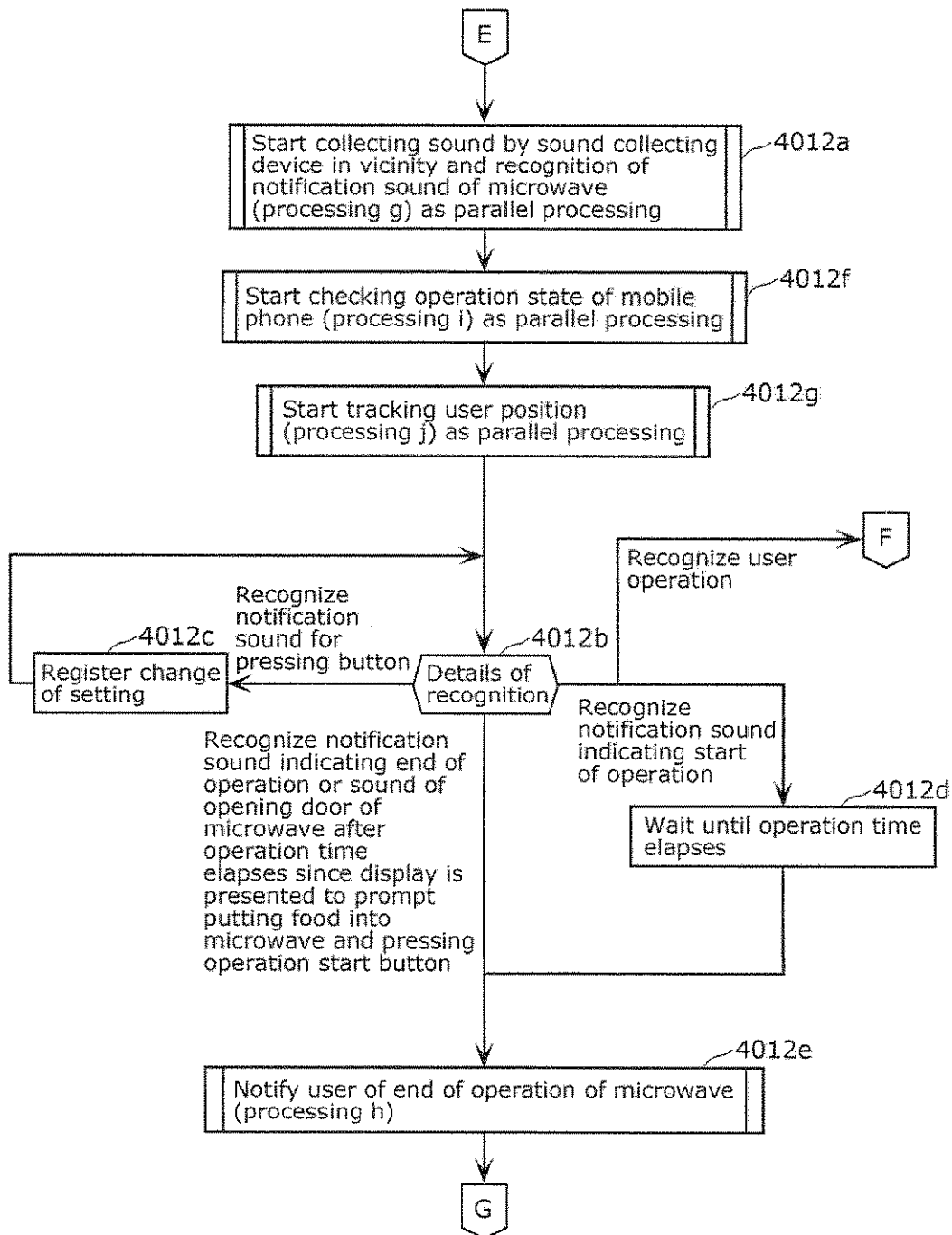


FIG. 34

(Processing g) Collect sound by sound collecting device in vicinity and recognize notification sound of microwave

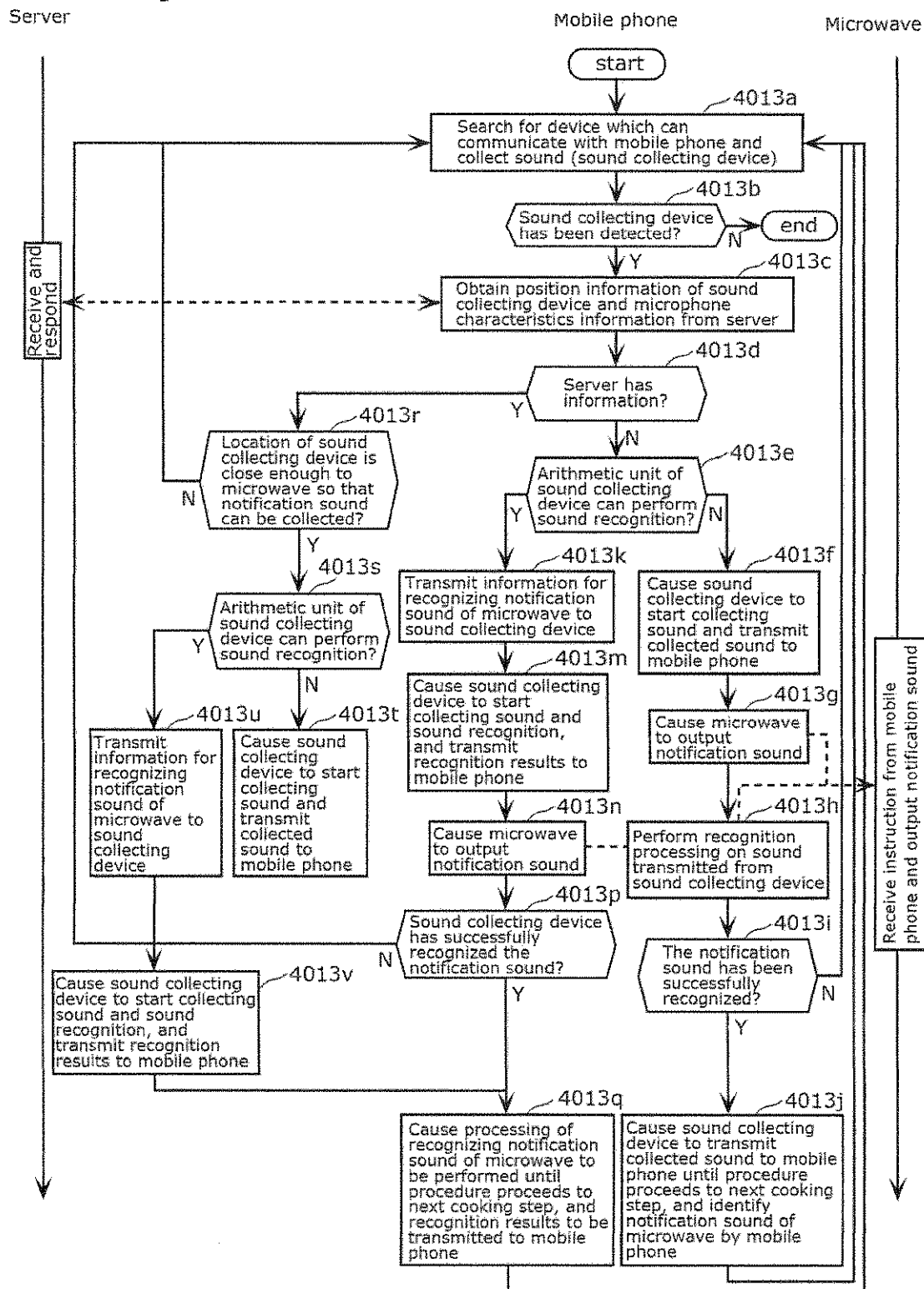


FIG. 35

(Processing h) Notify user of end of operation of microwave

Server

Mobile phone

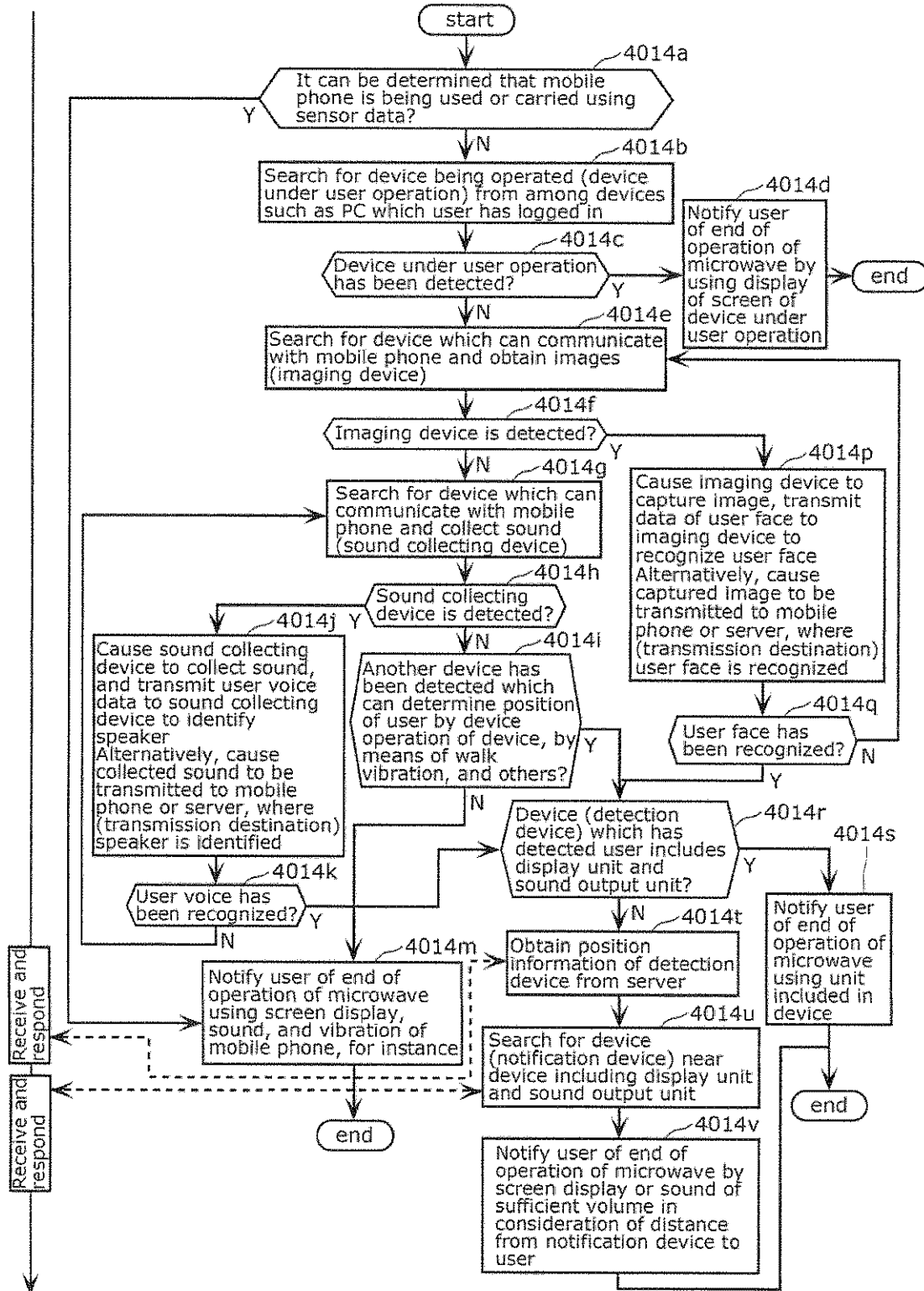


FIG. 36

(Processing i) Check operation state of mobile phone

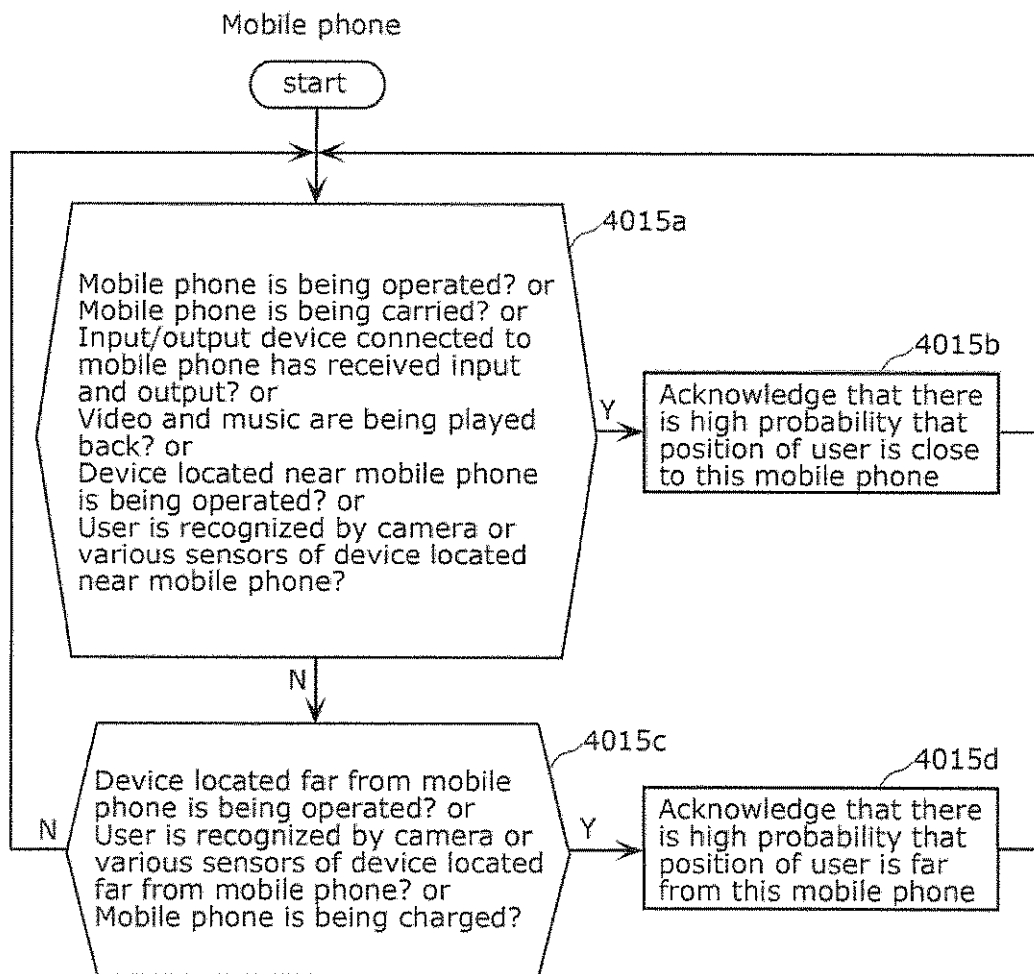
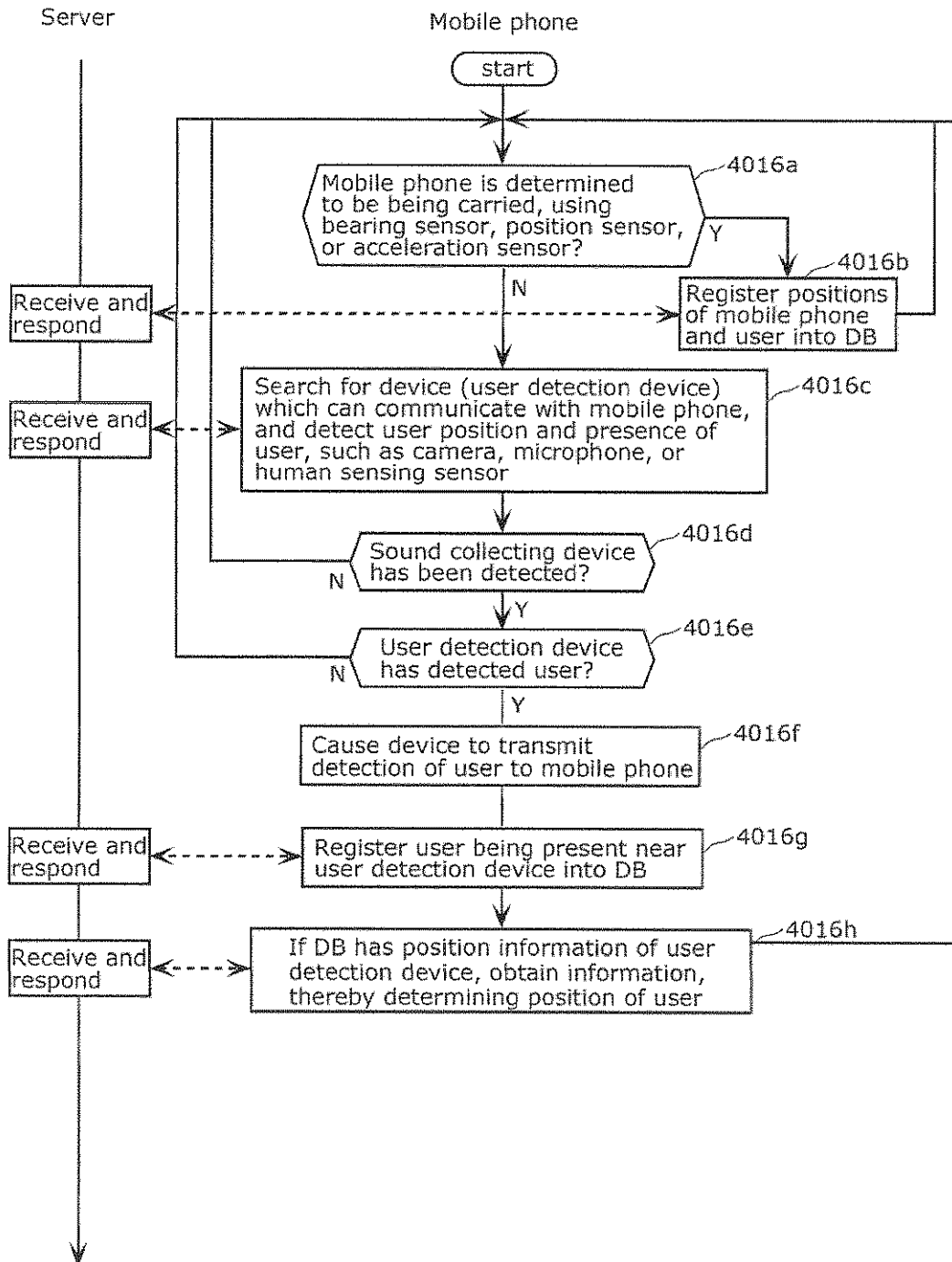


FIG. 37

(Processing j) Track user position



38. FIG.

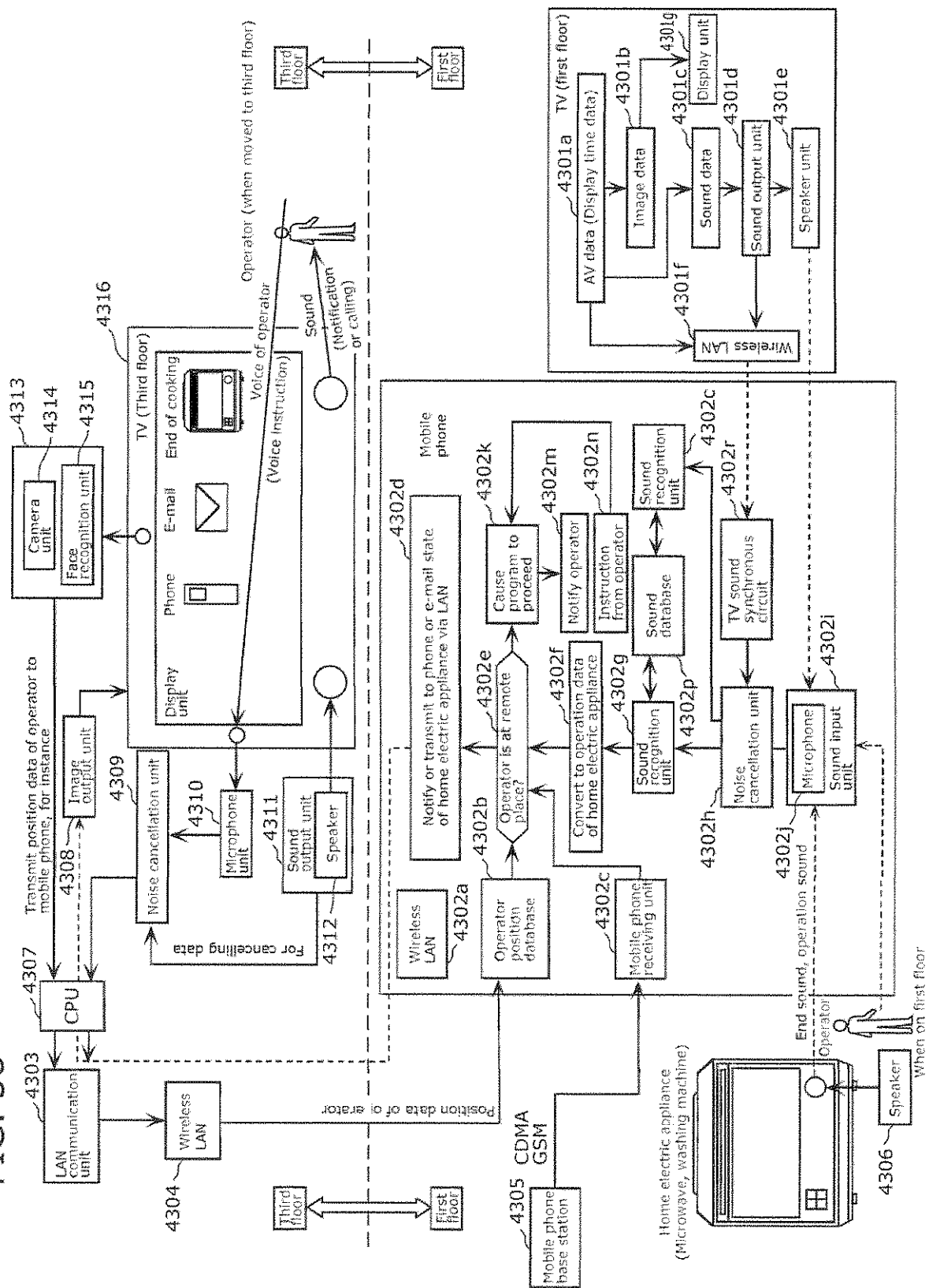


FIG. 39

Database

Microwave table 4040a

Model ID of microwave	Data for identifying sound which can be output by microwave (speaker characteristics and modulation method, for instance)	Notification sound data for mobile phone model A (sound easily recognized by A)	Notification sound data for mobile phone model B (sound easily recognized by B)	...	Notification sound data for typical mobile phone (sound easily recognized on average)

Mobile phone table 4040a

Mobile phone ID	Mobile phone model ID	User ID	Mobile phone position data

Mobile phone model table 4040c

Mobile phone model ID	Sound-collecting characteristics

User voice characteristic table 4040d

User ID	User voice acoustic feature

User keyword voice table 4040e

User ID	Voice waveform data obtained when user says keyword

User owned device position table 4040f

User ID	Owned device ID	Owned device position data

User owned device sound data table 4040g

User ID	Owned device ID	Sound data output by owned device

User position table 4040h

User ID	User position data

FIG. 40

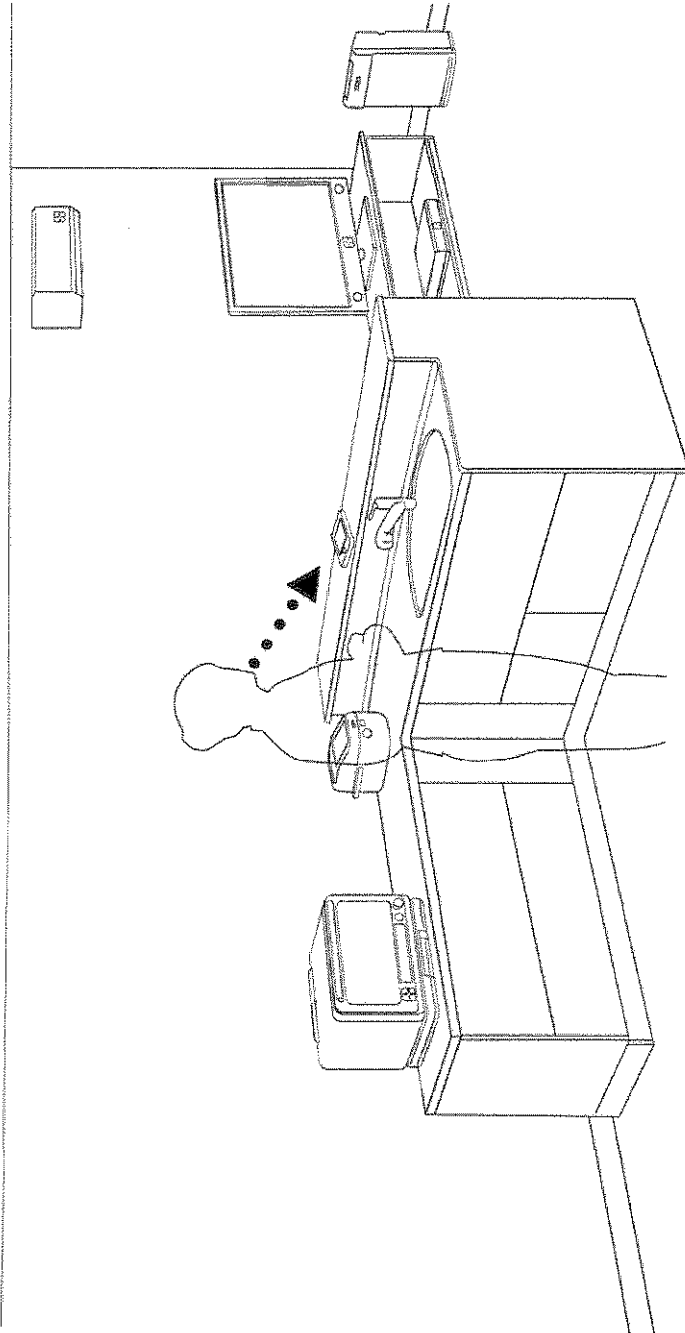
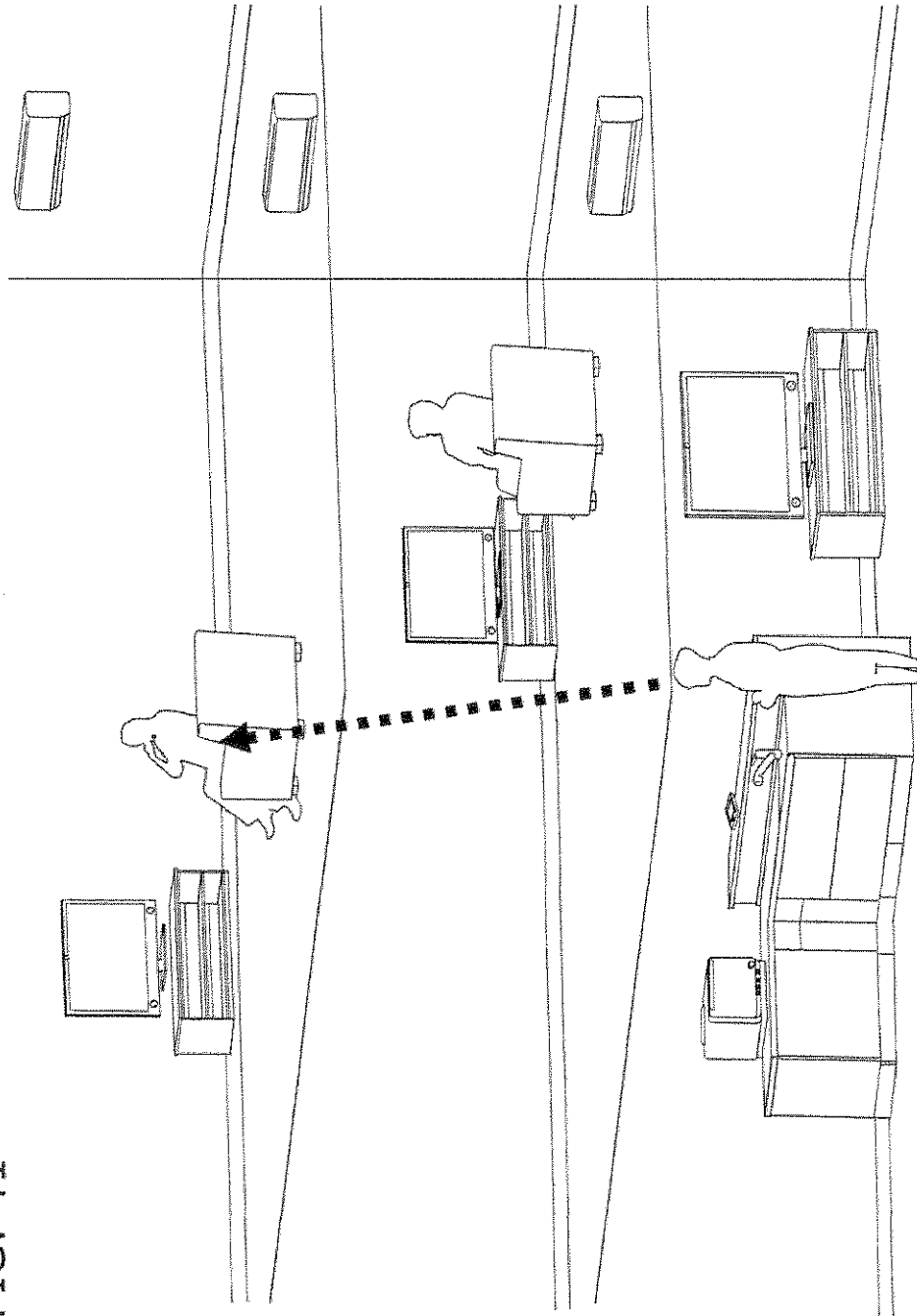


FIG. 41



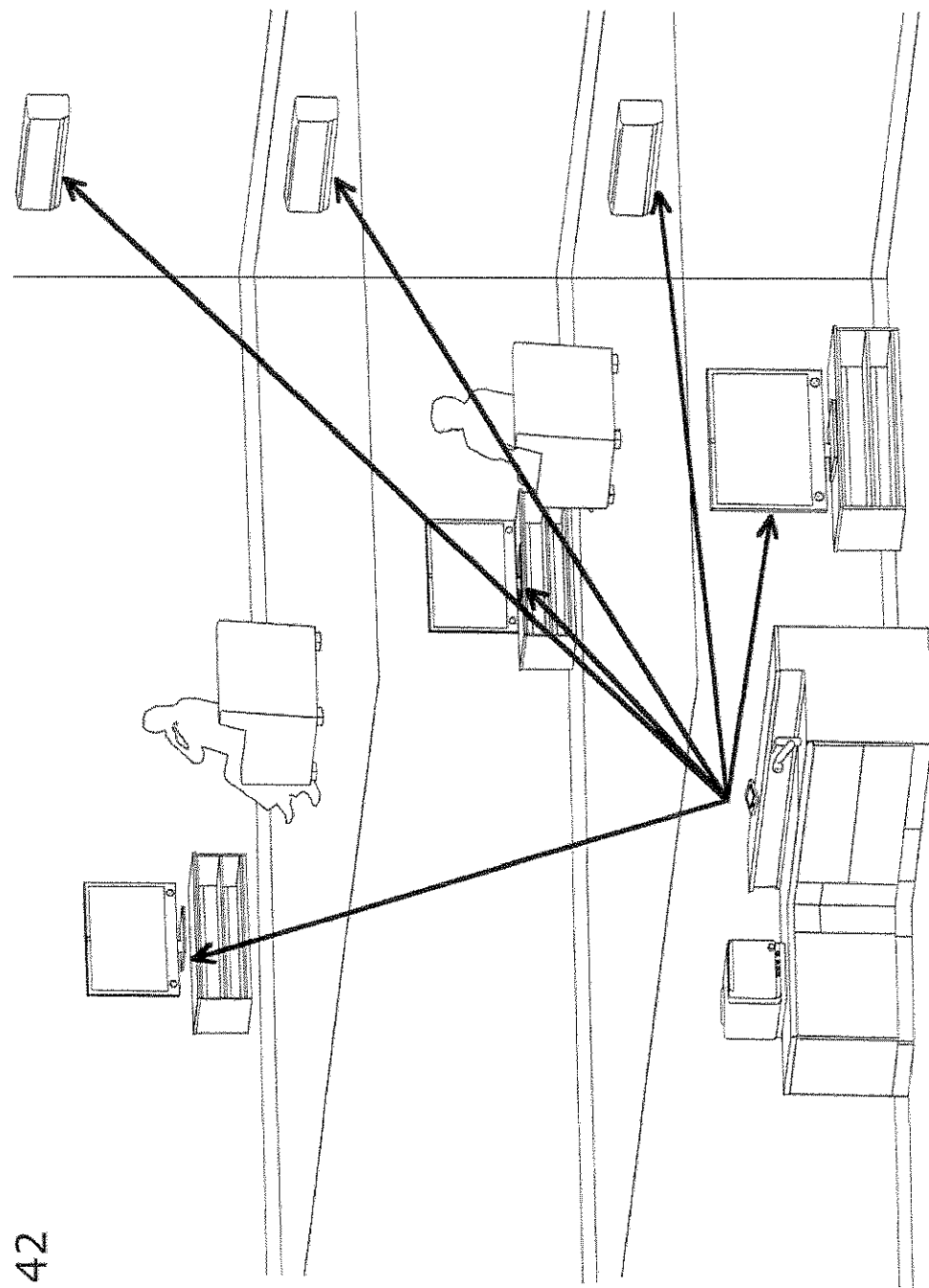
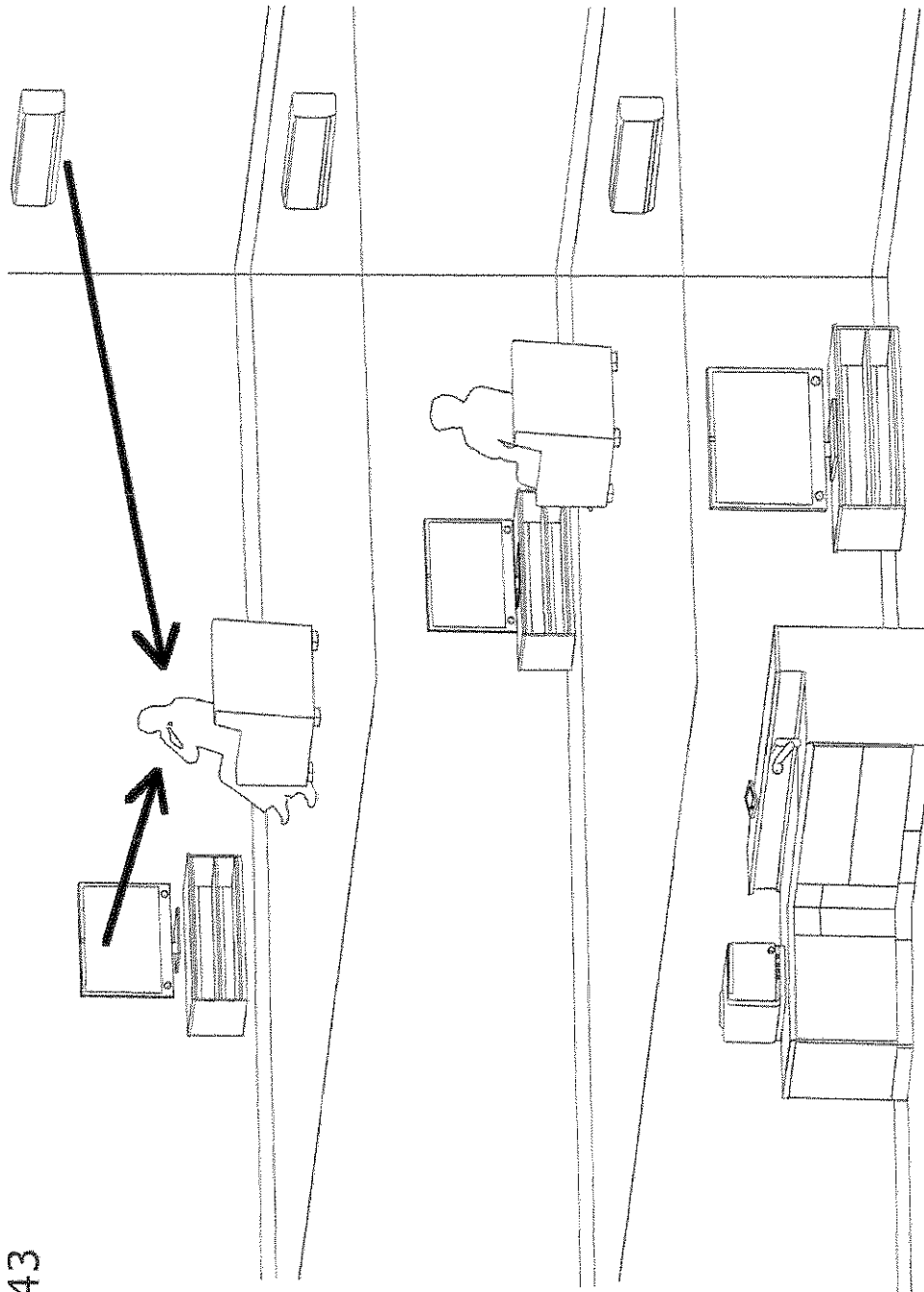


FIG. 42

FIG. 43



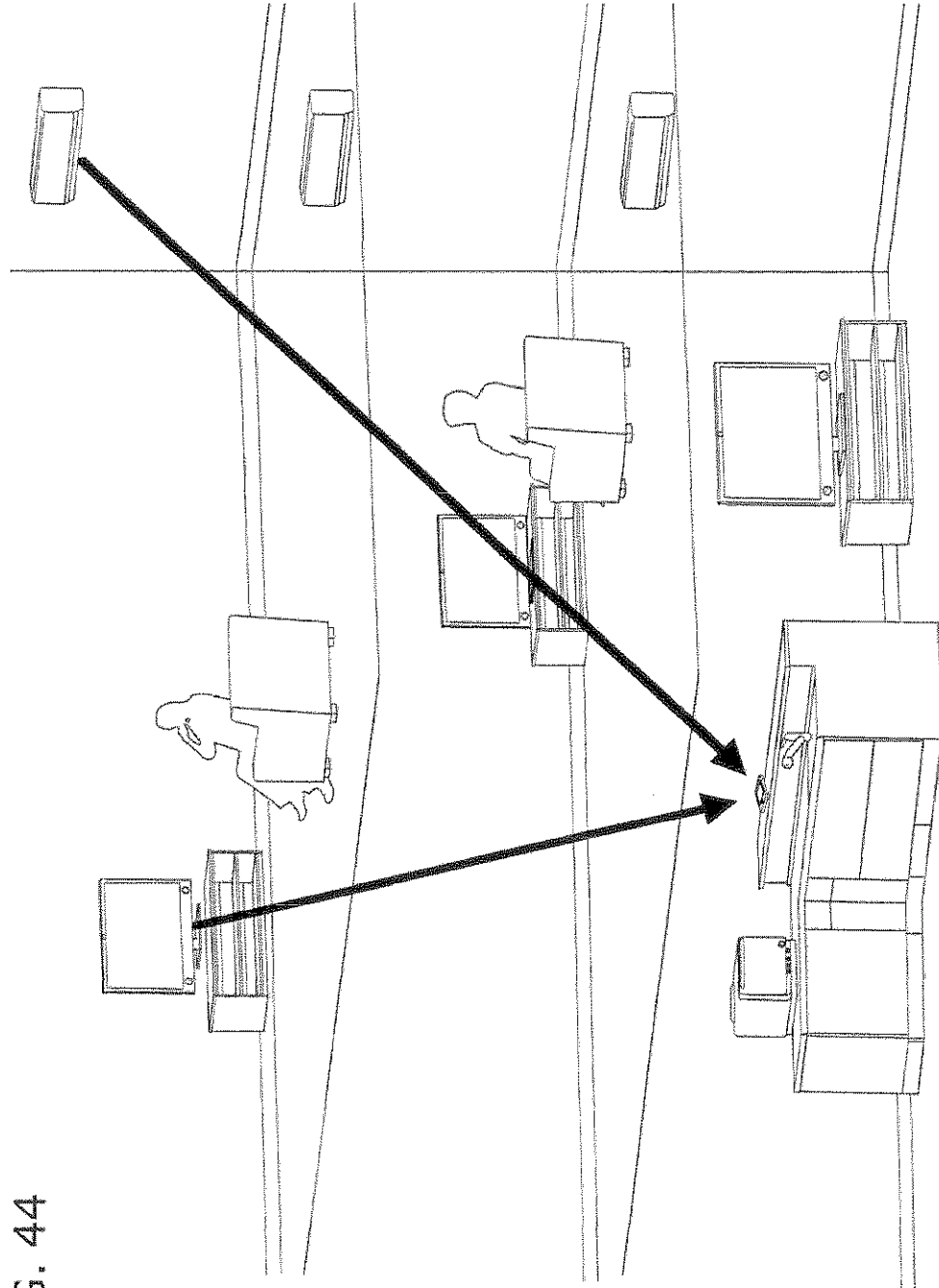


FIG. 44

FIG. 45

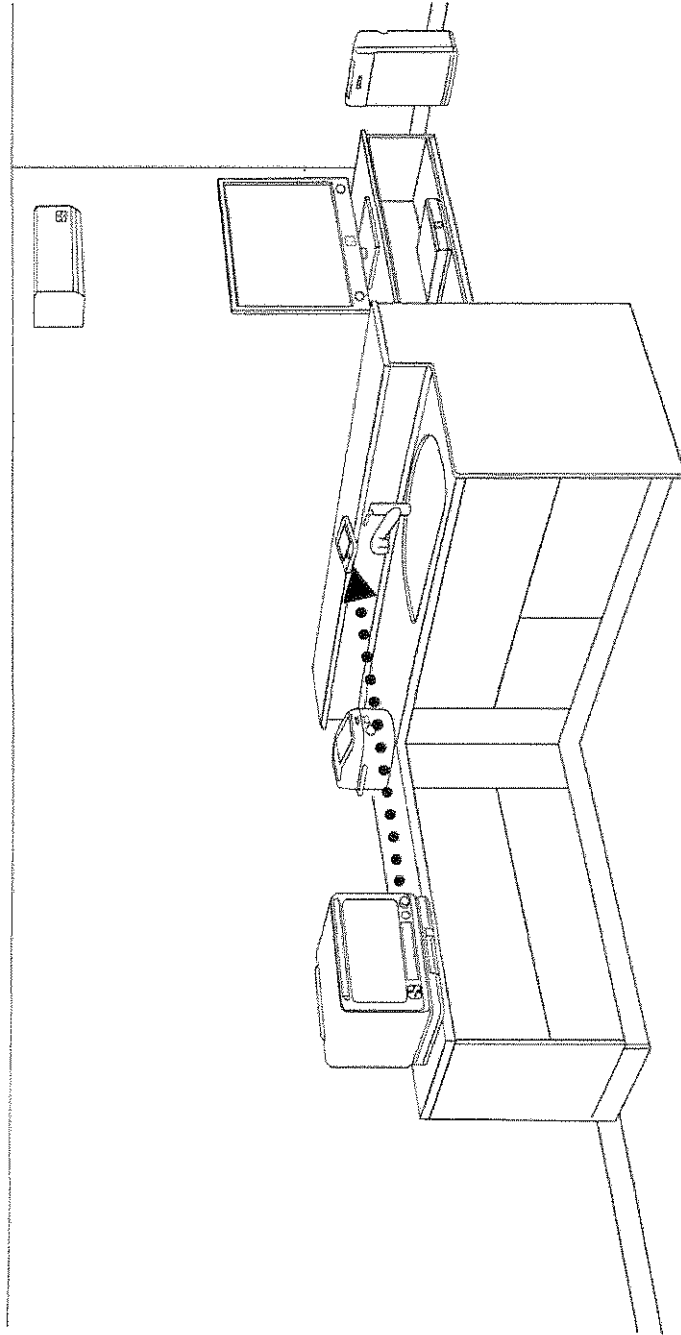


FIG. 46

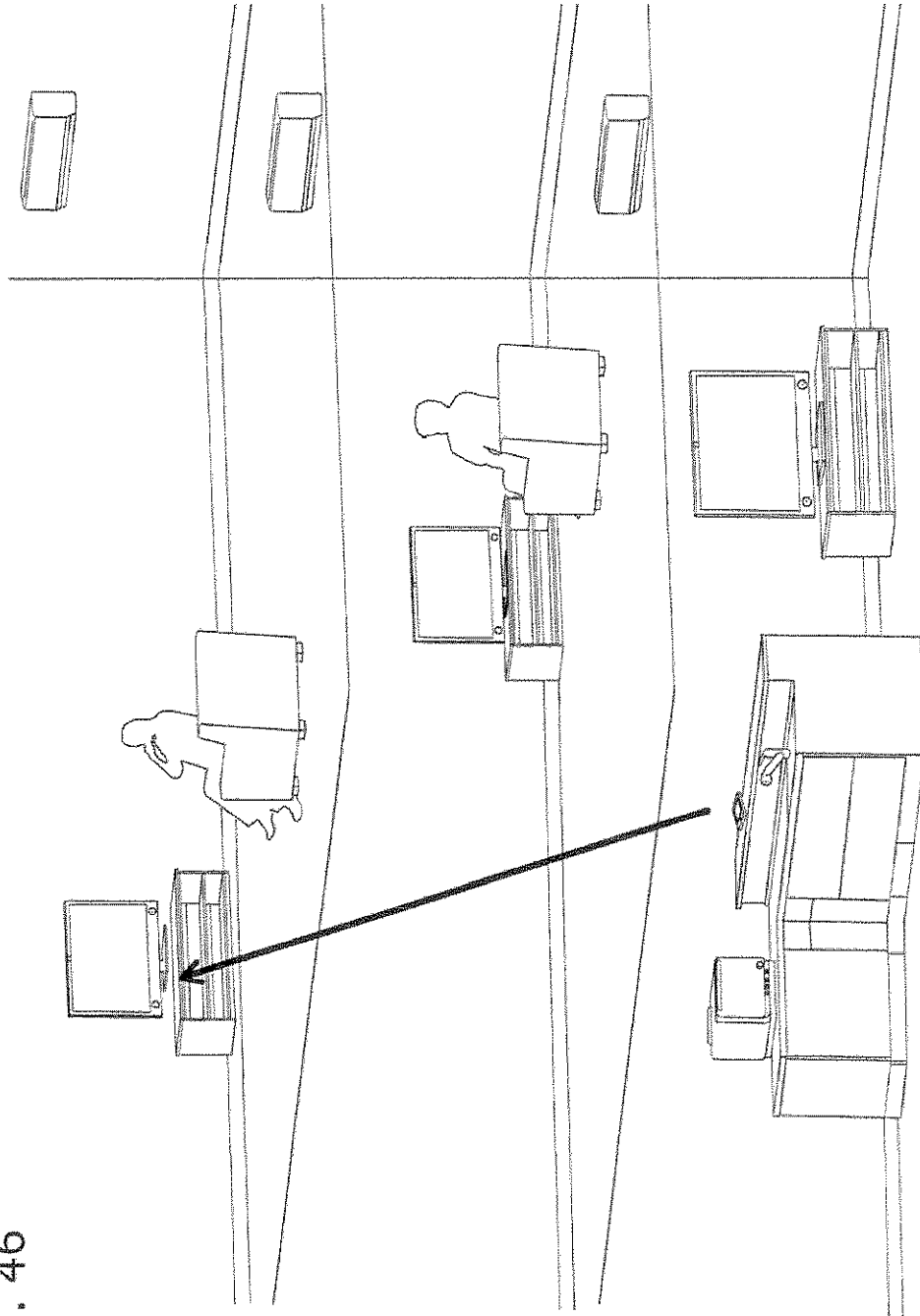


FIG. 47

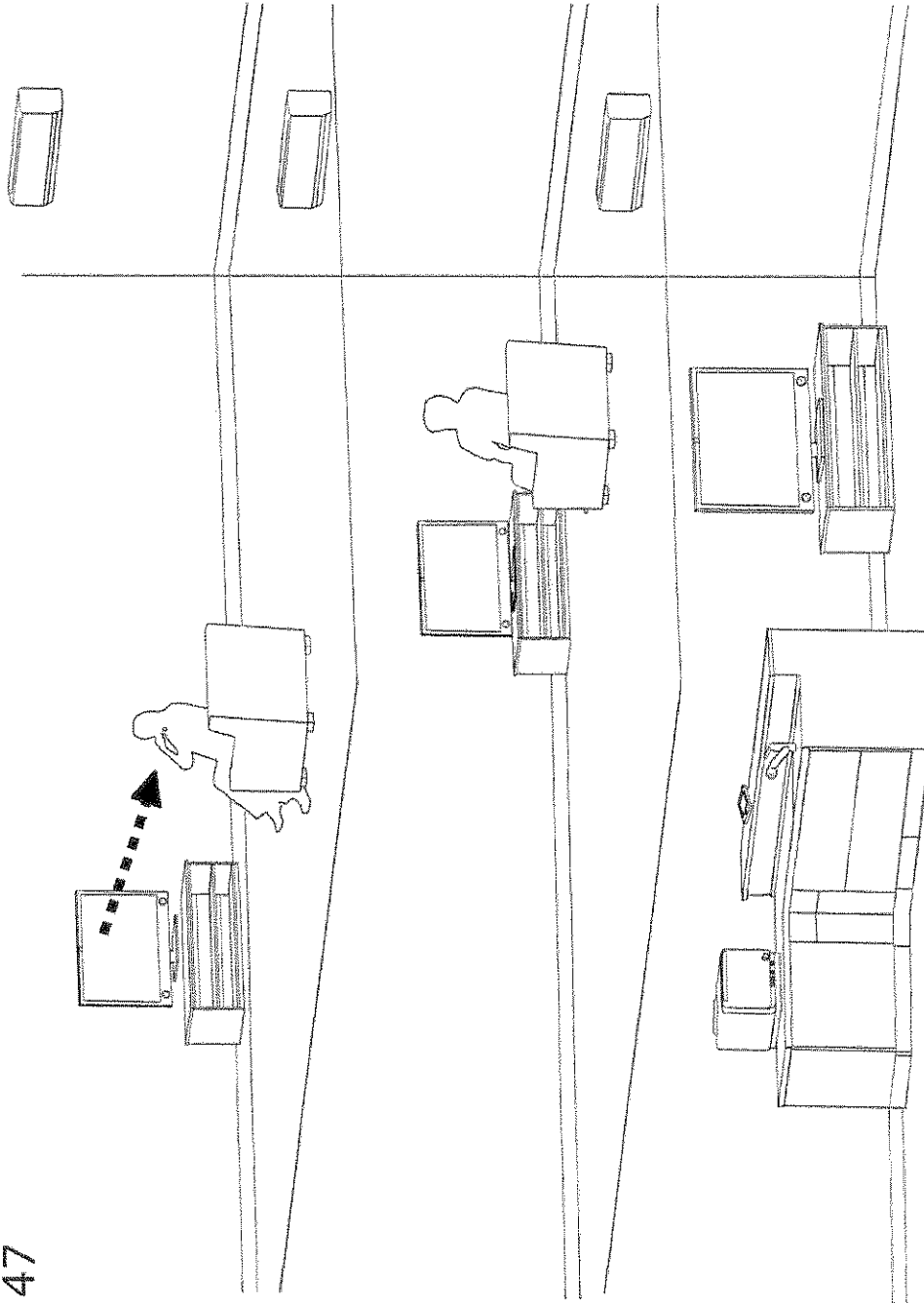


FIG. 48

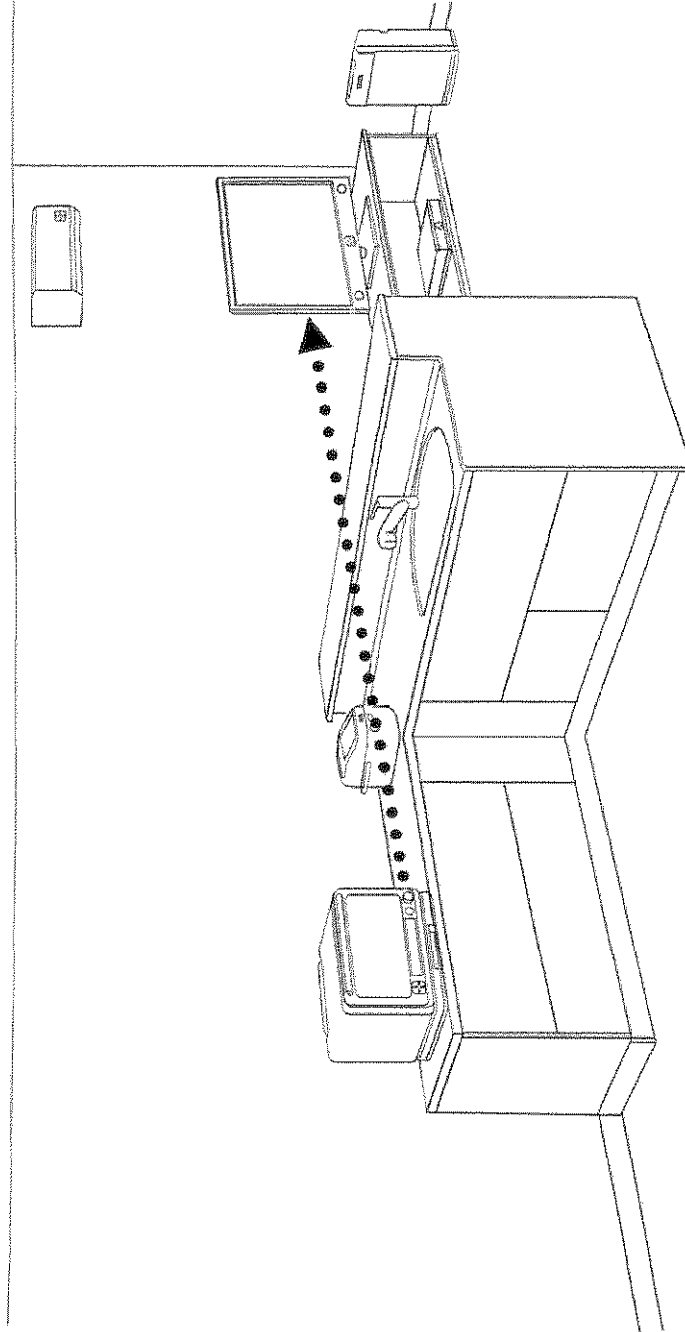


FIG. 49

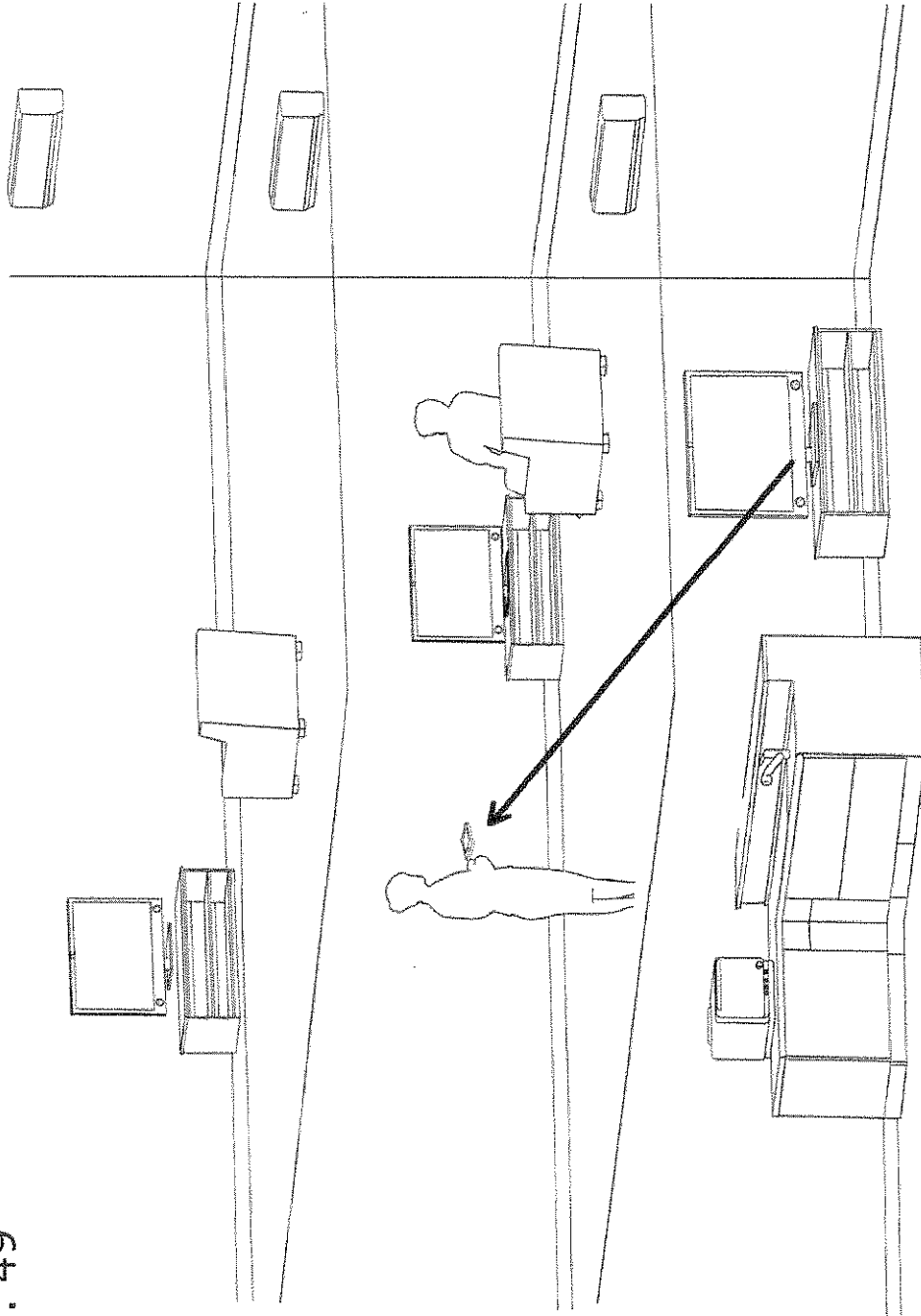


FIG. 50

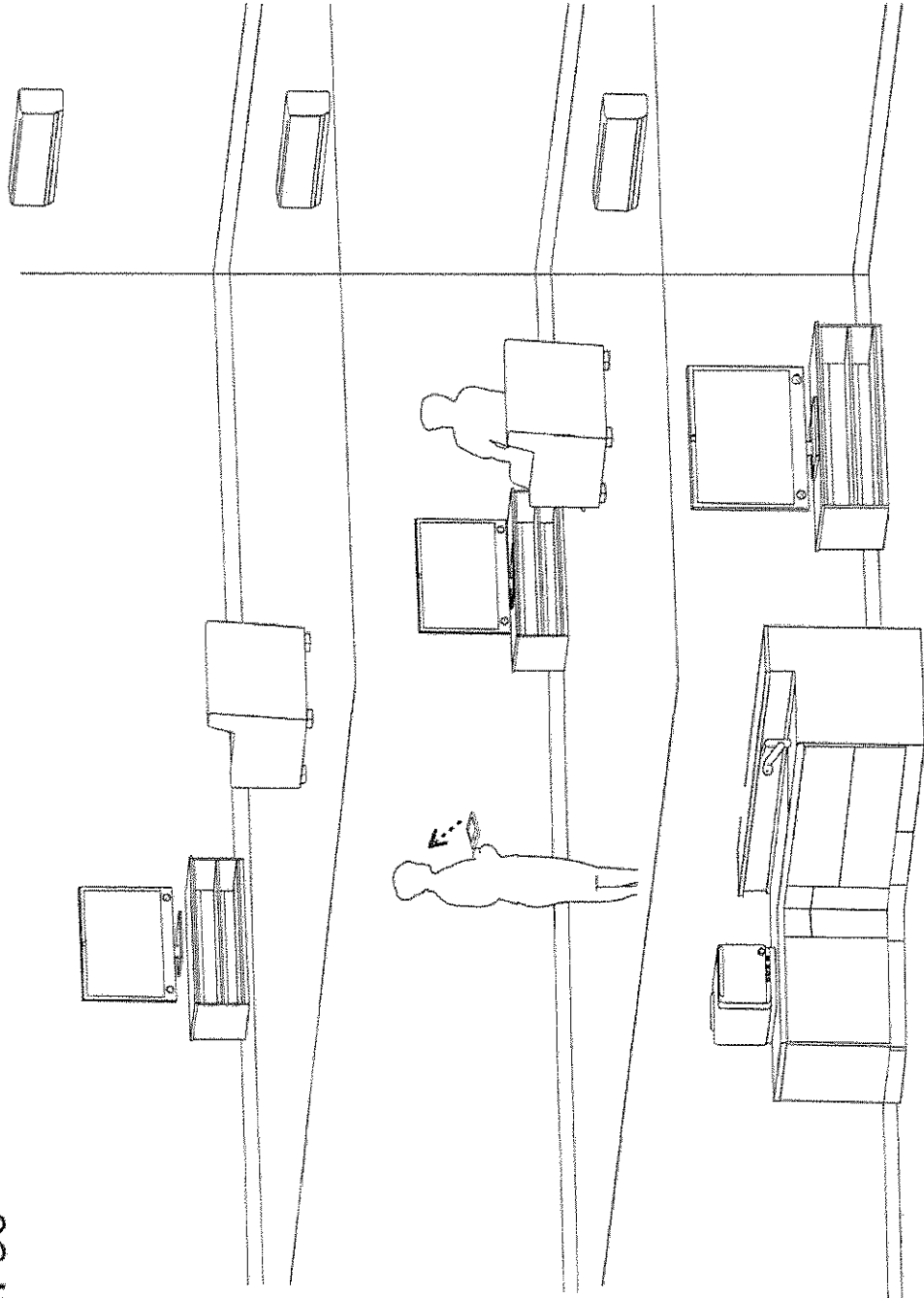


FIG. 51

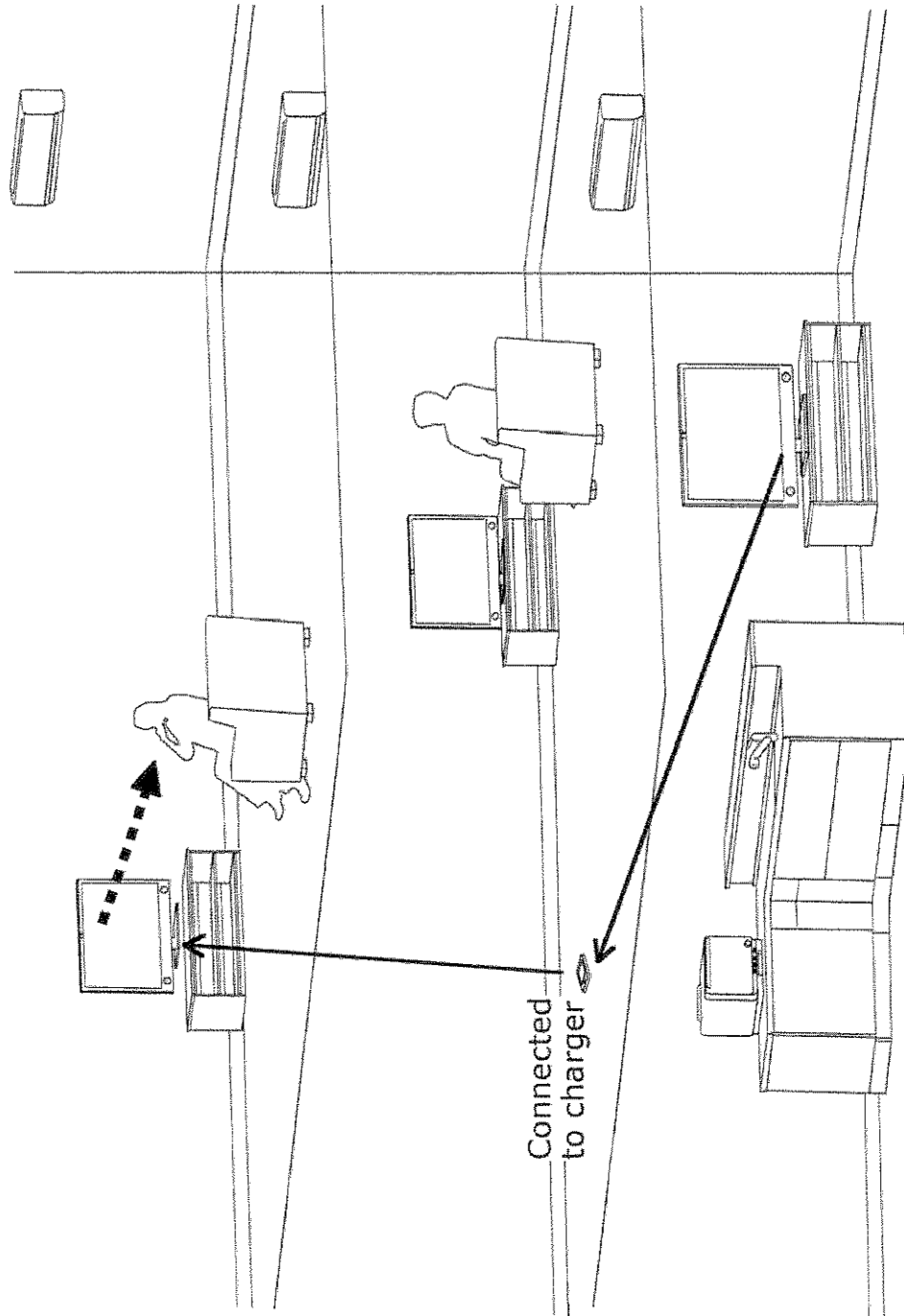


FIG. 52

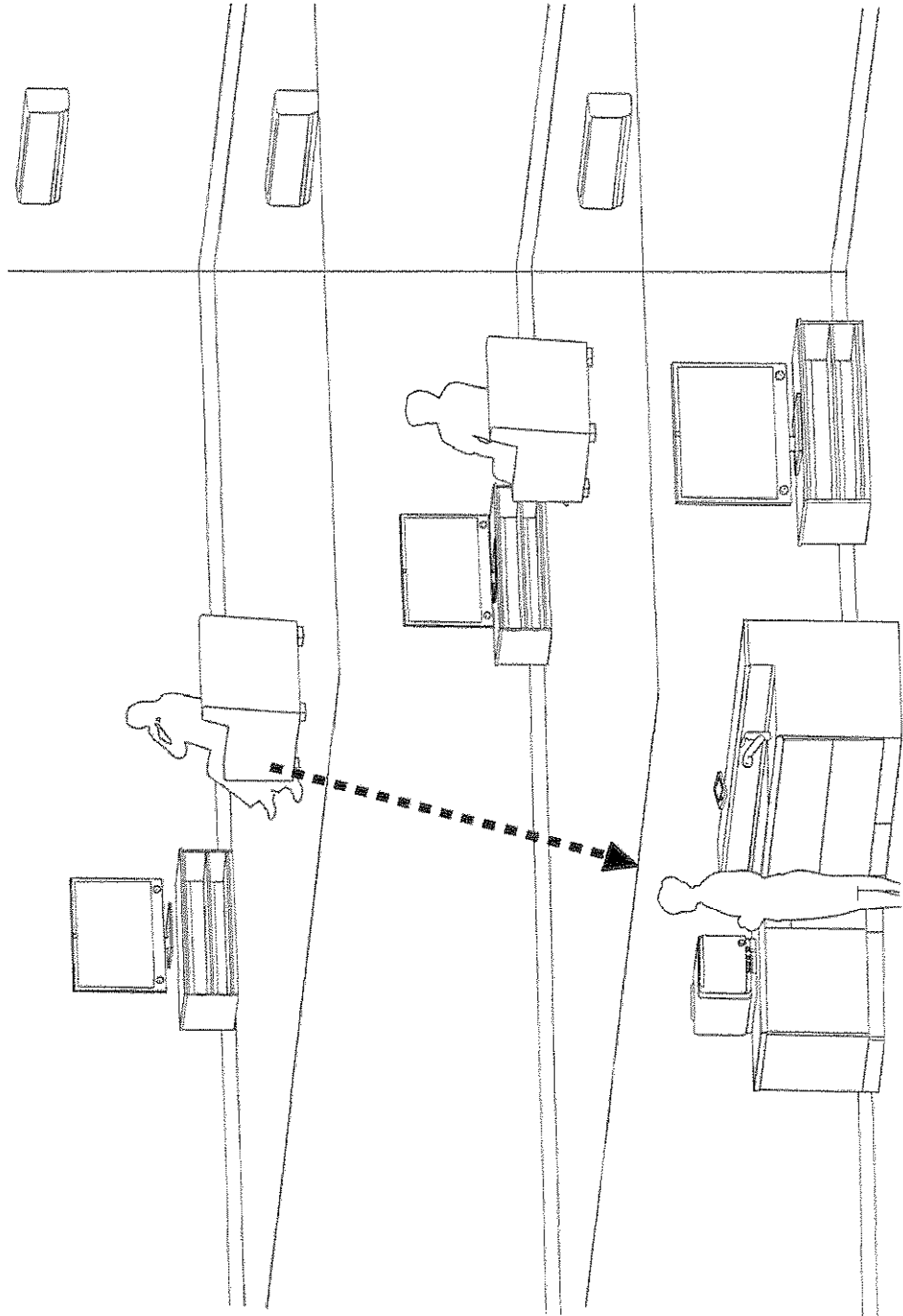


FIG. 53

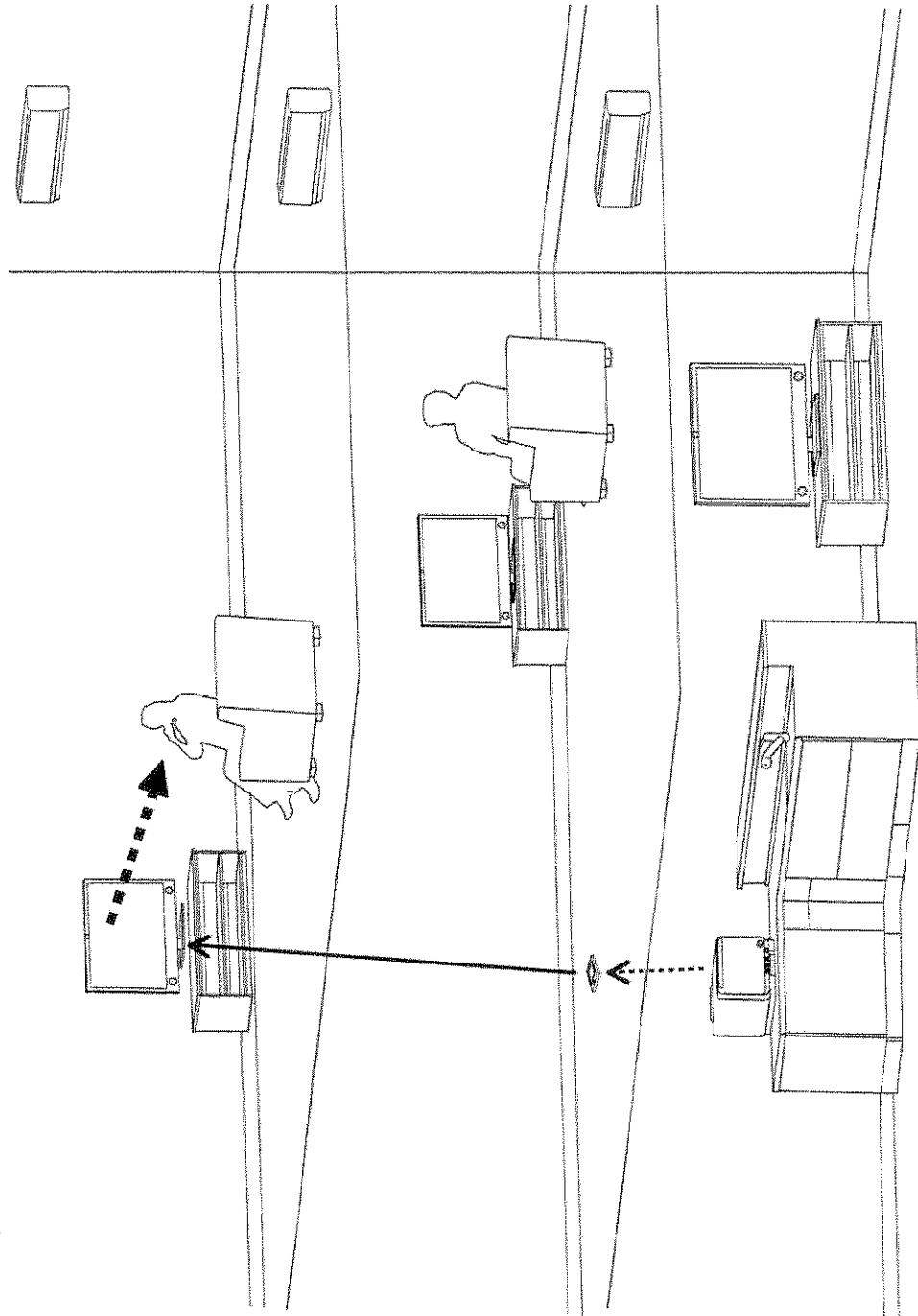


FIG. 54

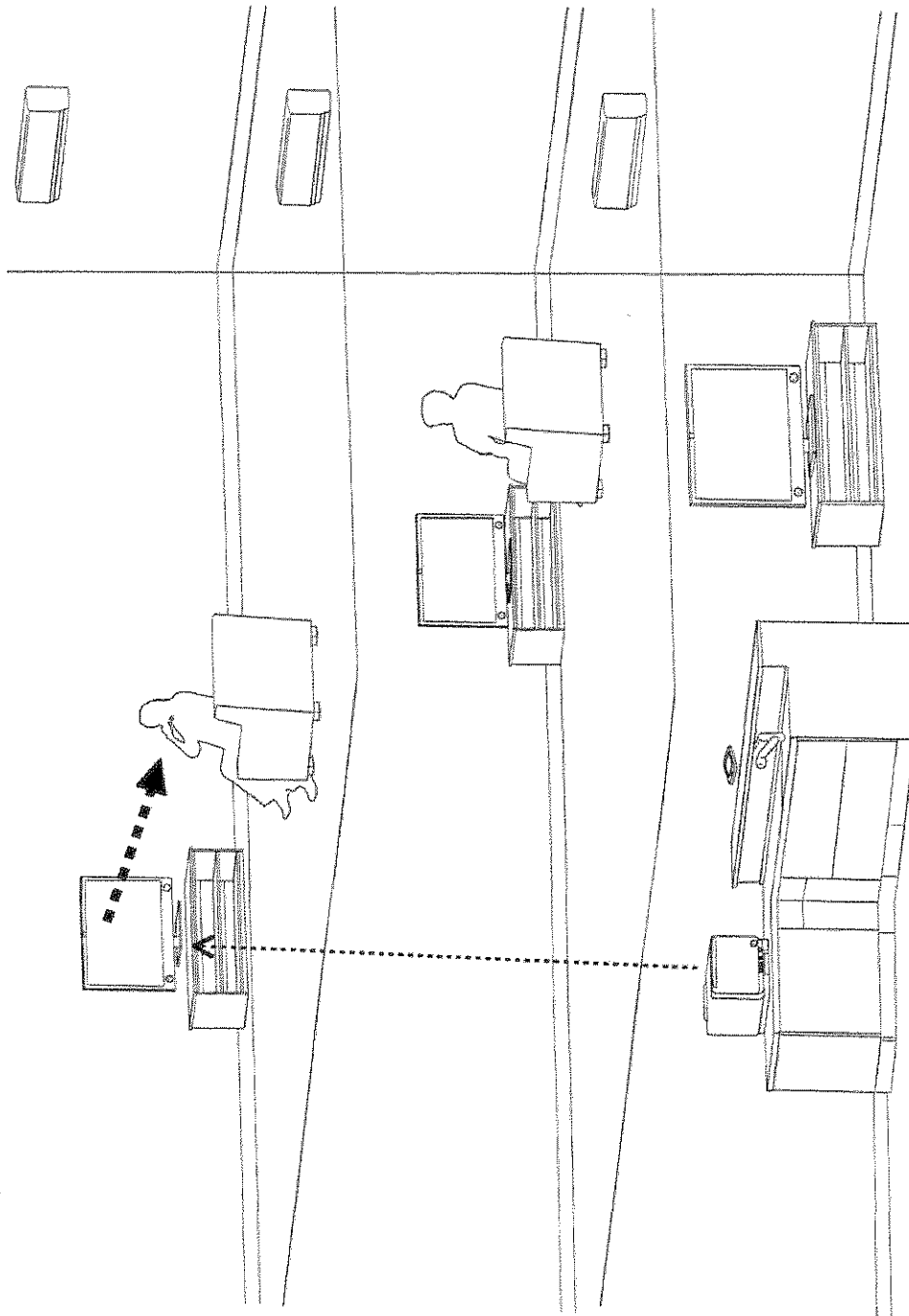


FIG. 56

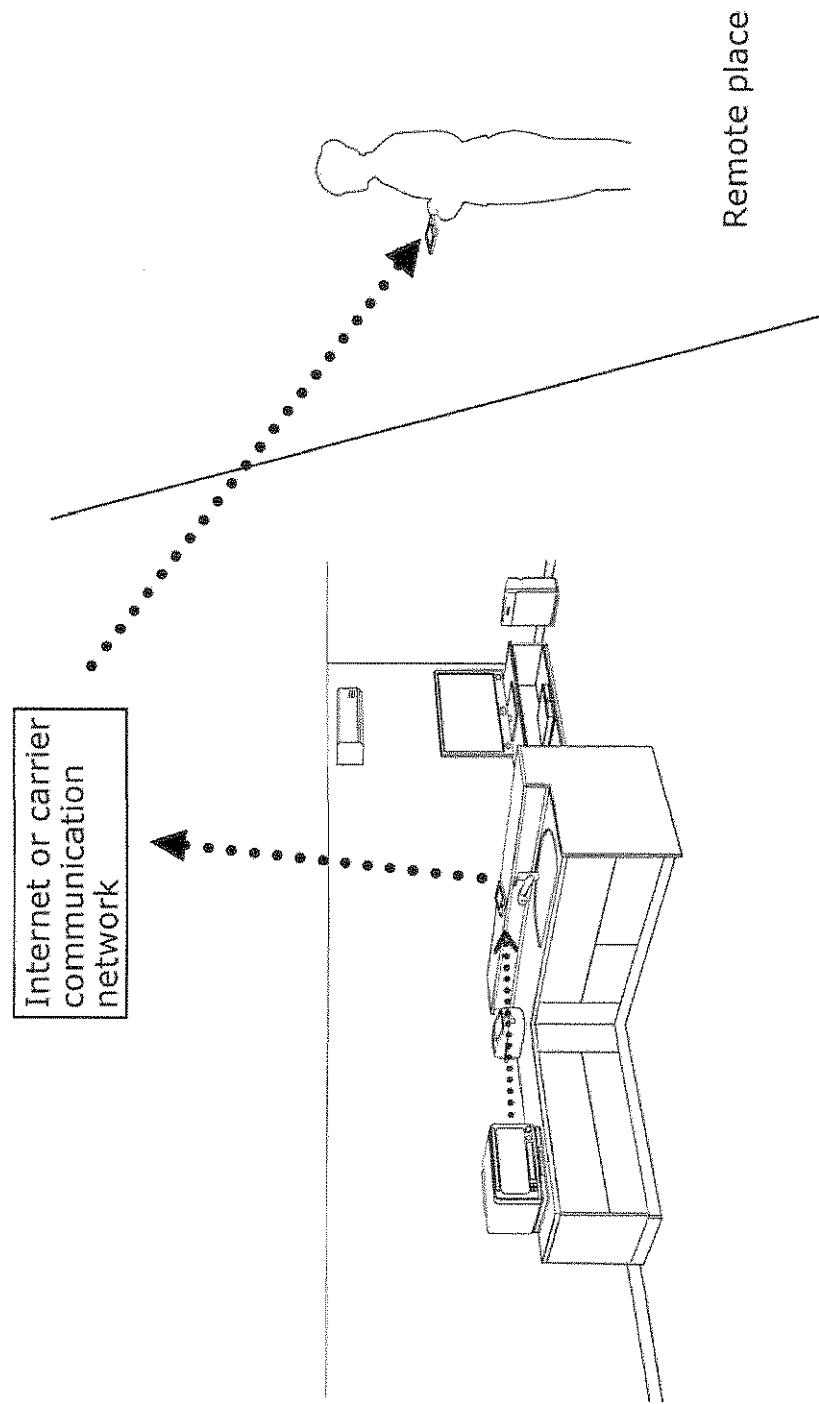


FIG. 57

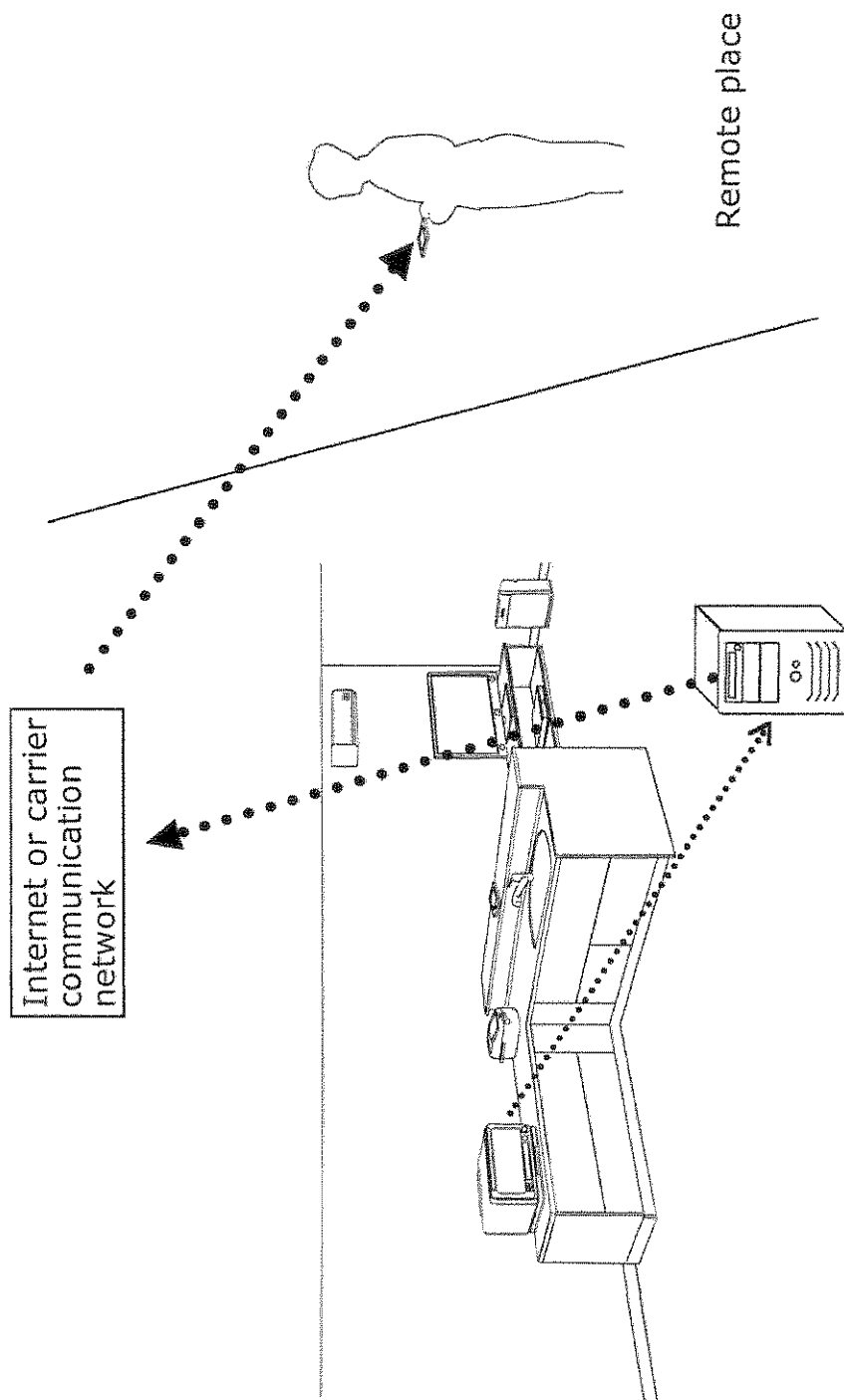


FIG. 58

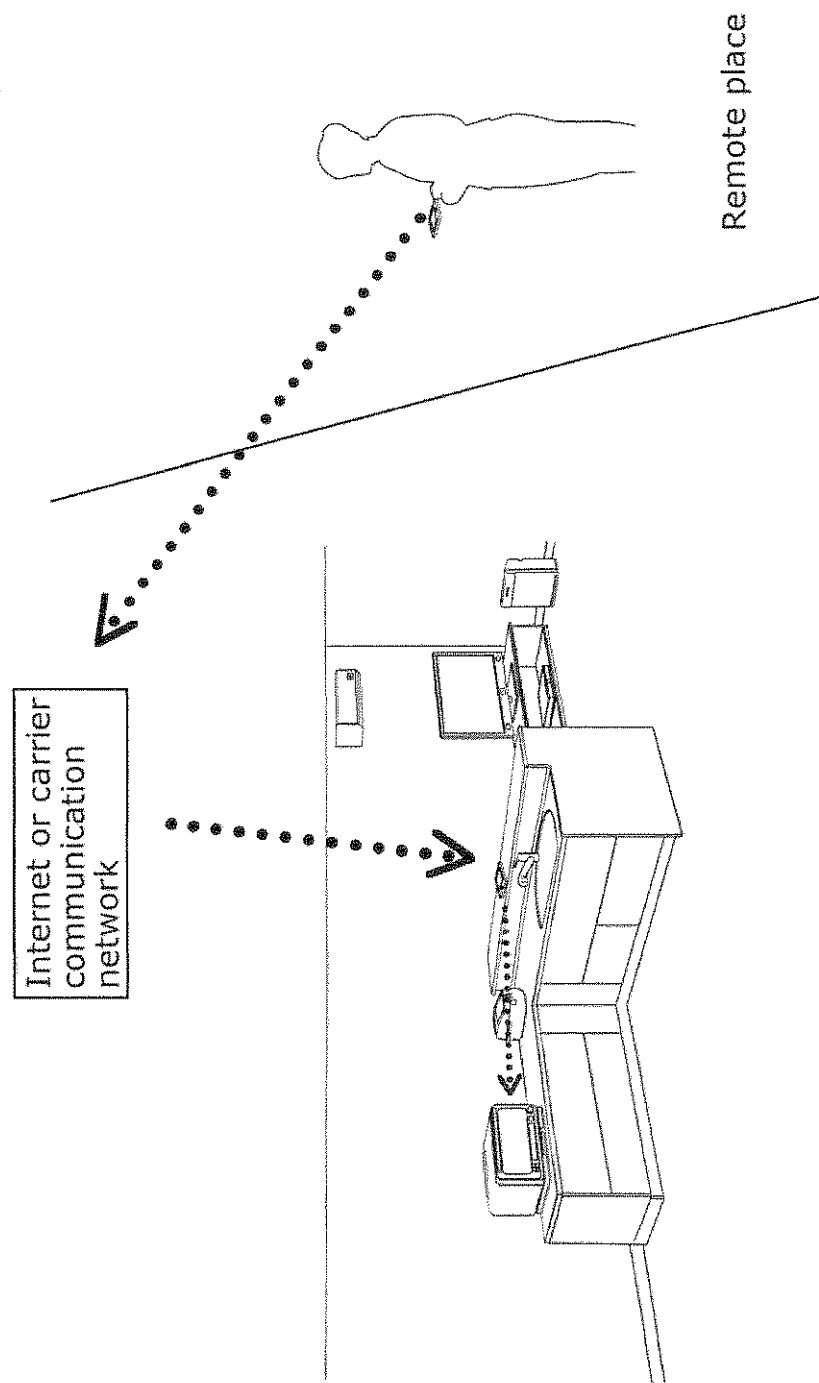


FIG. 59

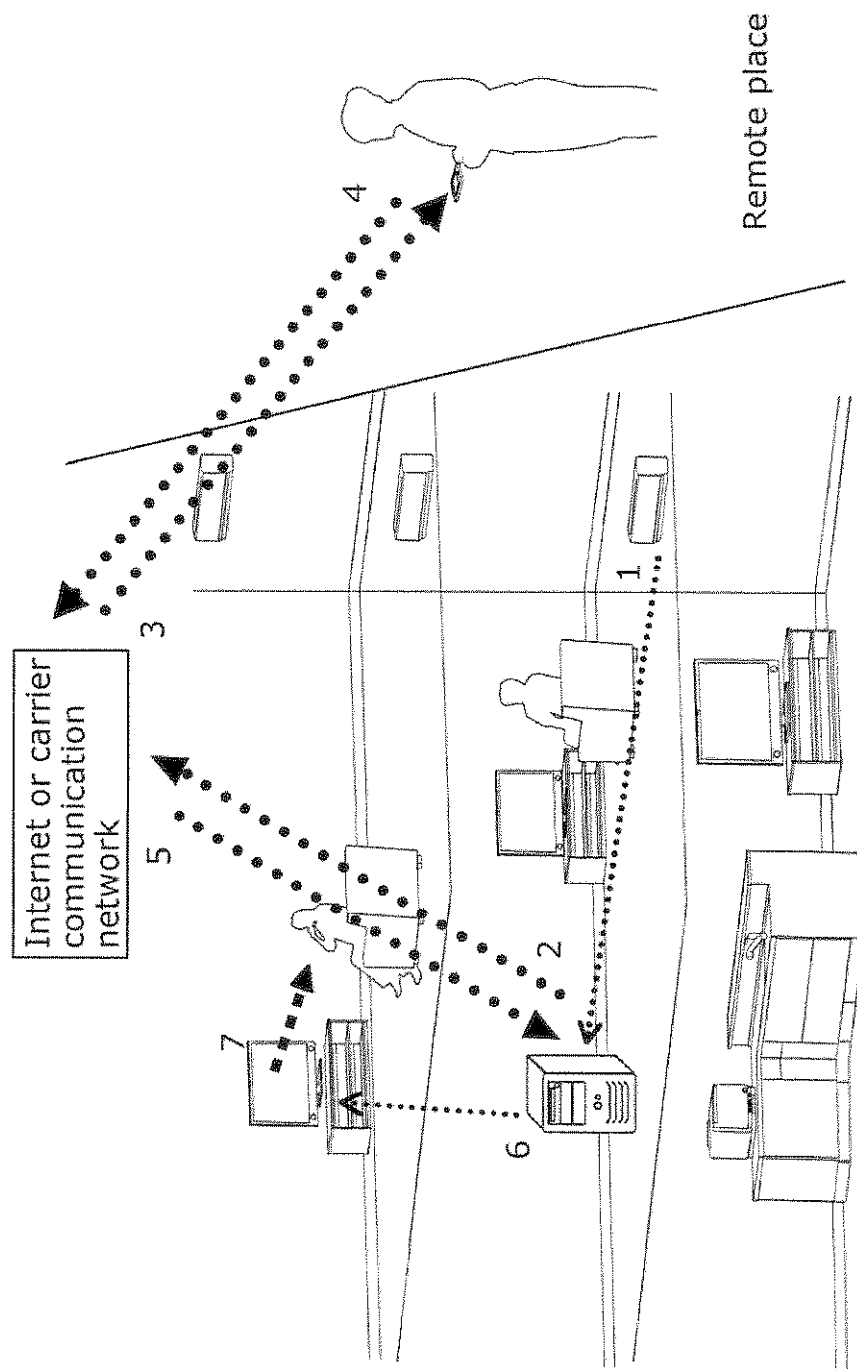


FIG. 60

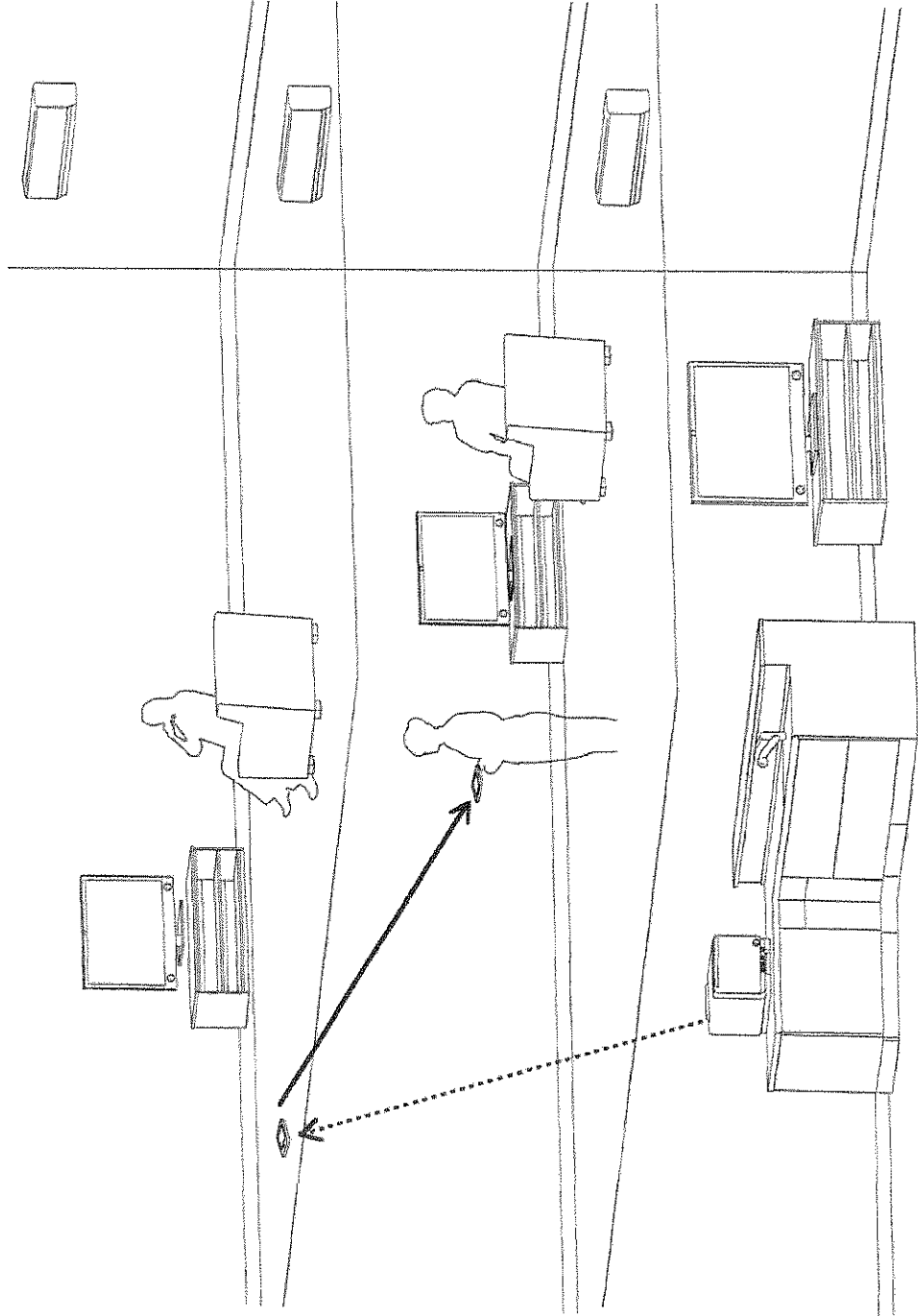


FIG. 61

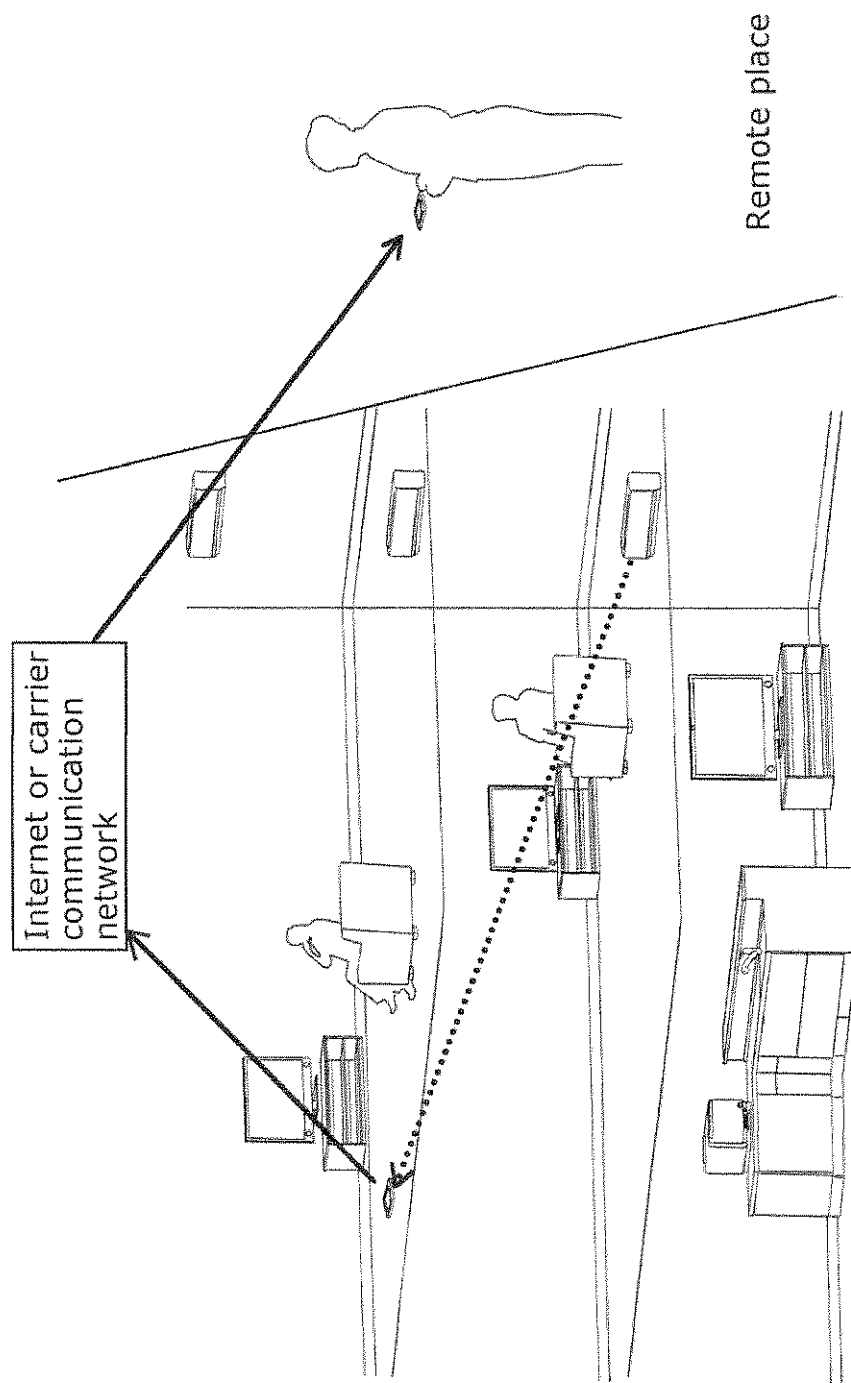


FIG. 62

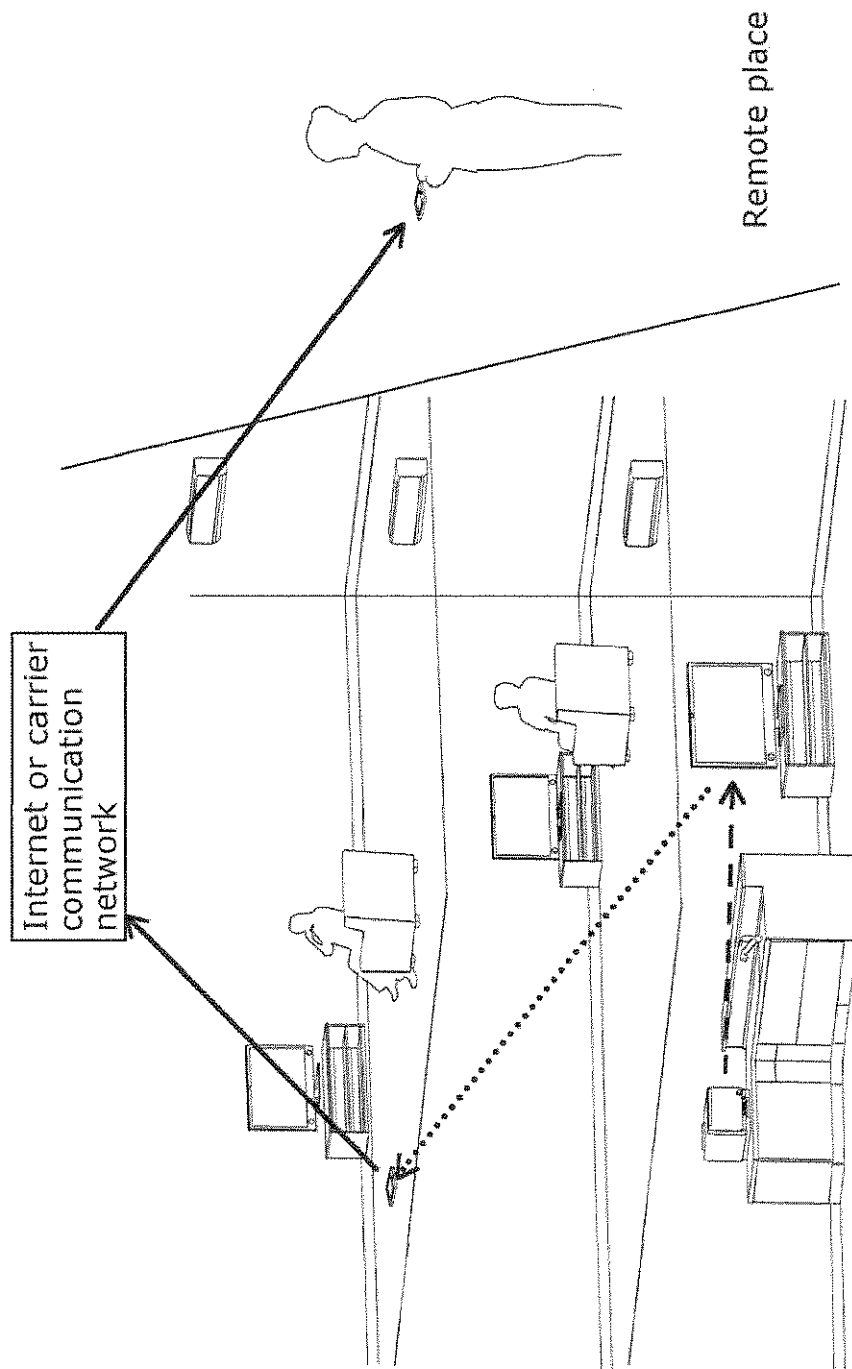


FIG. 63

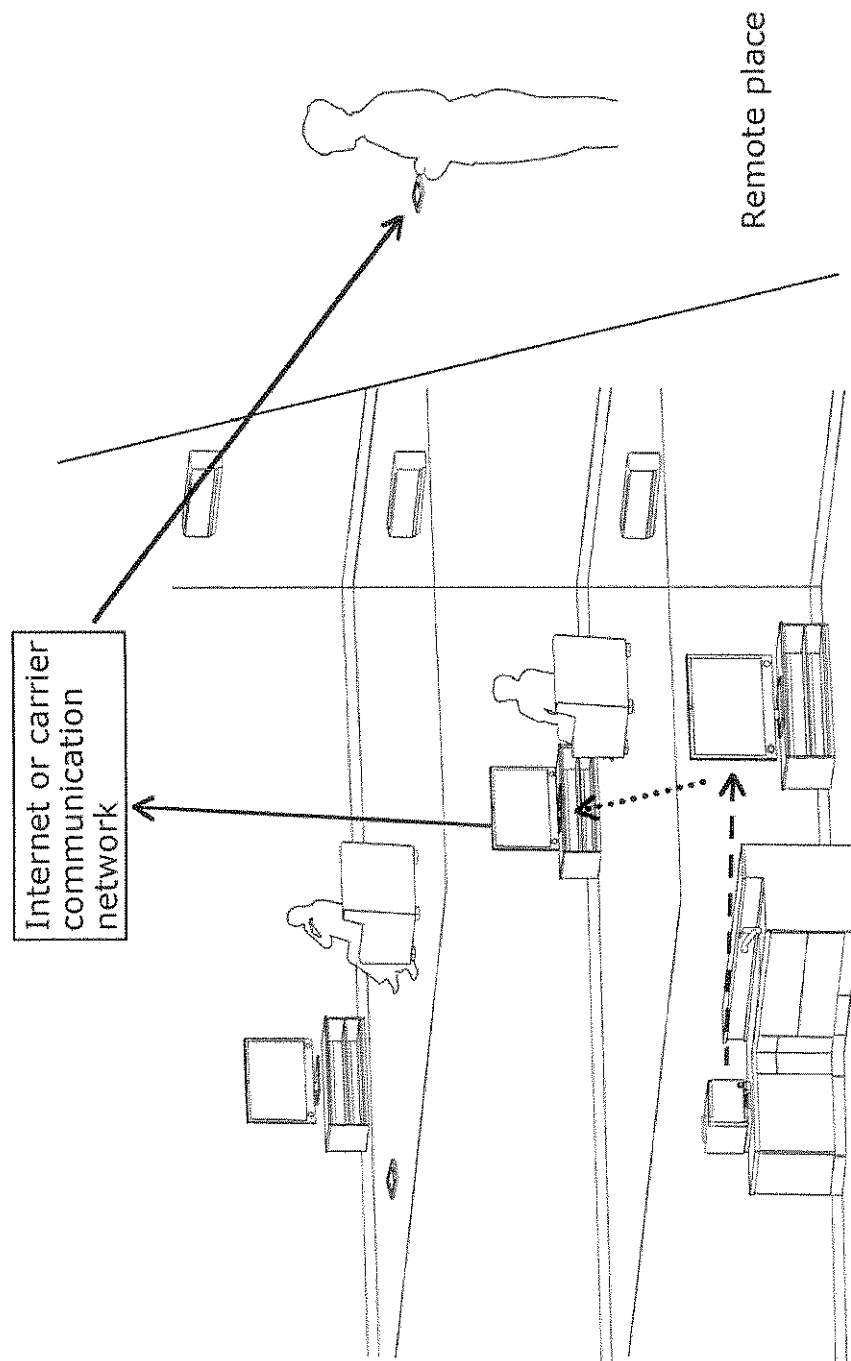


FIG. 64

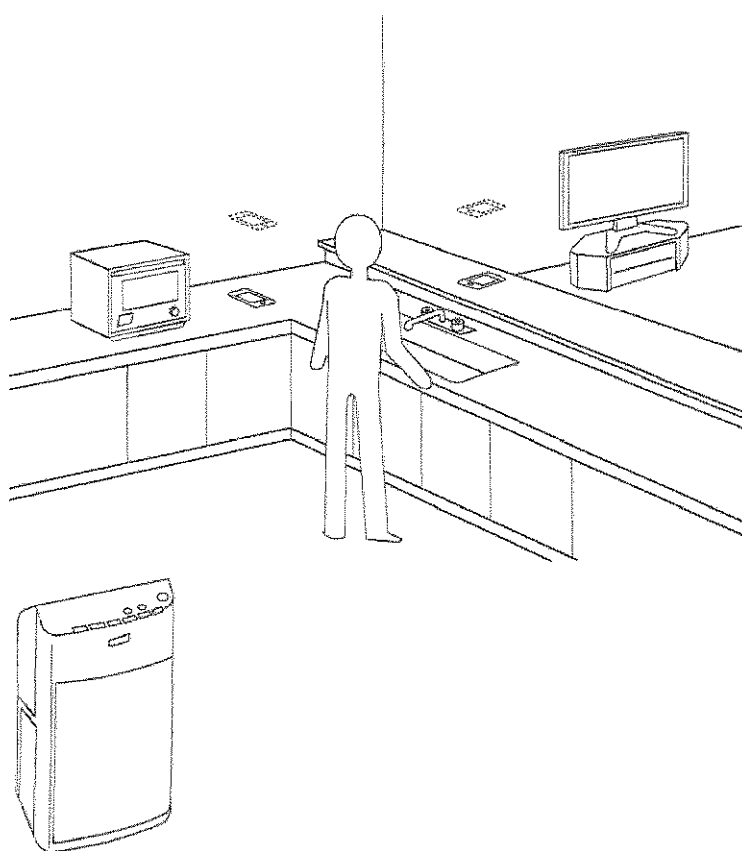


FIG. 65

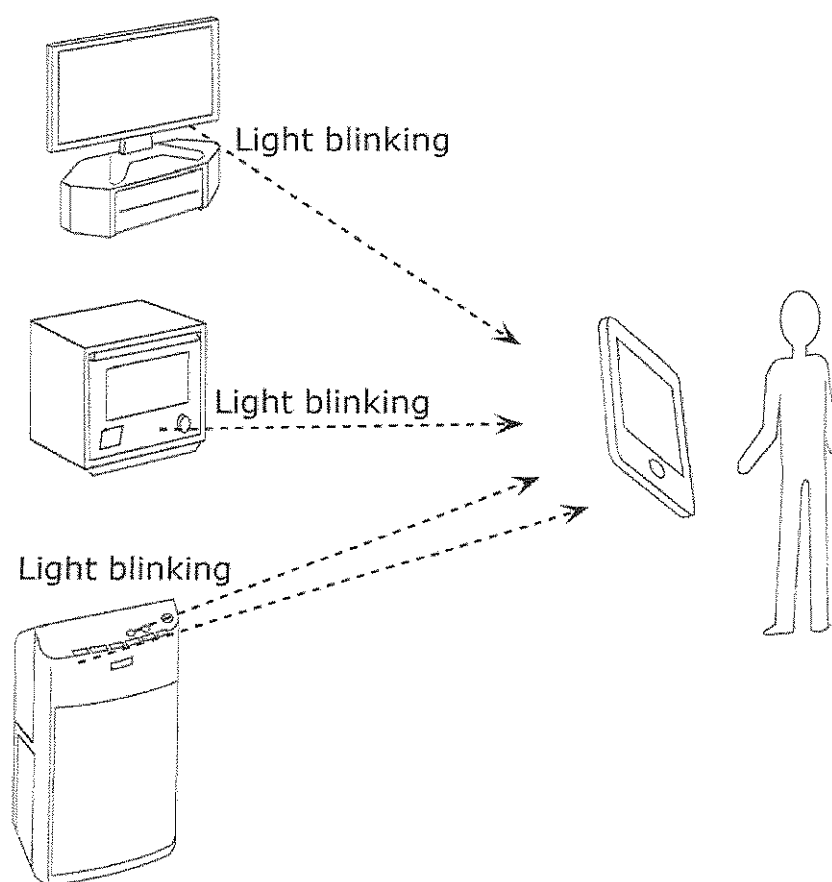


FIG. 66

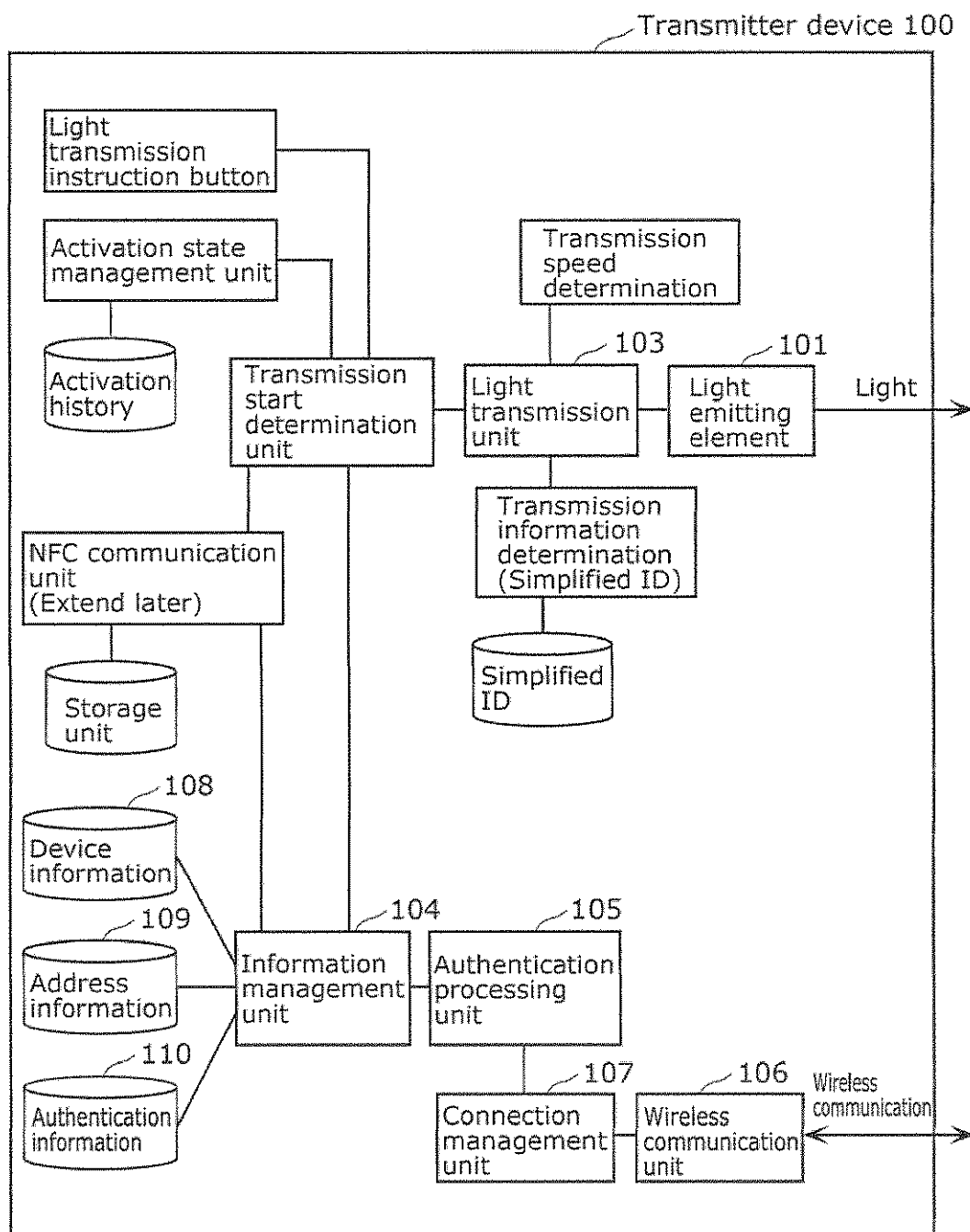


FIG. 67

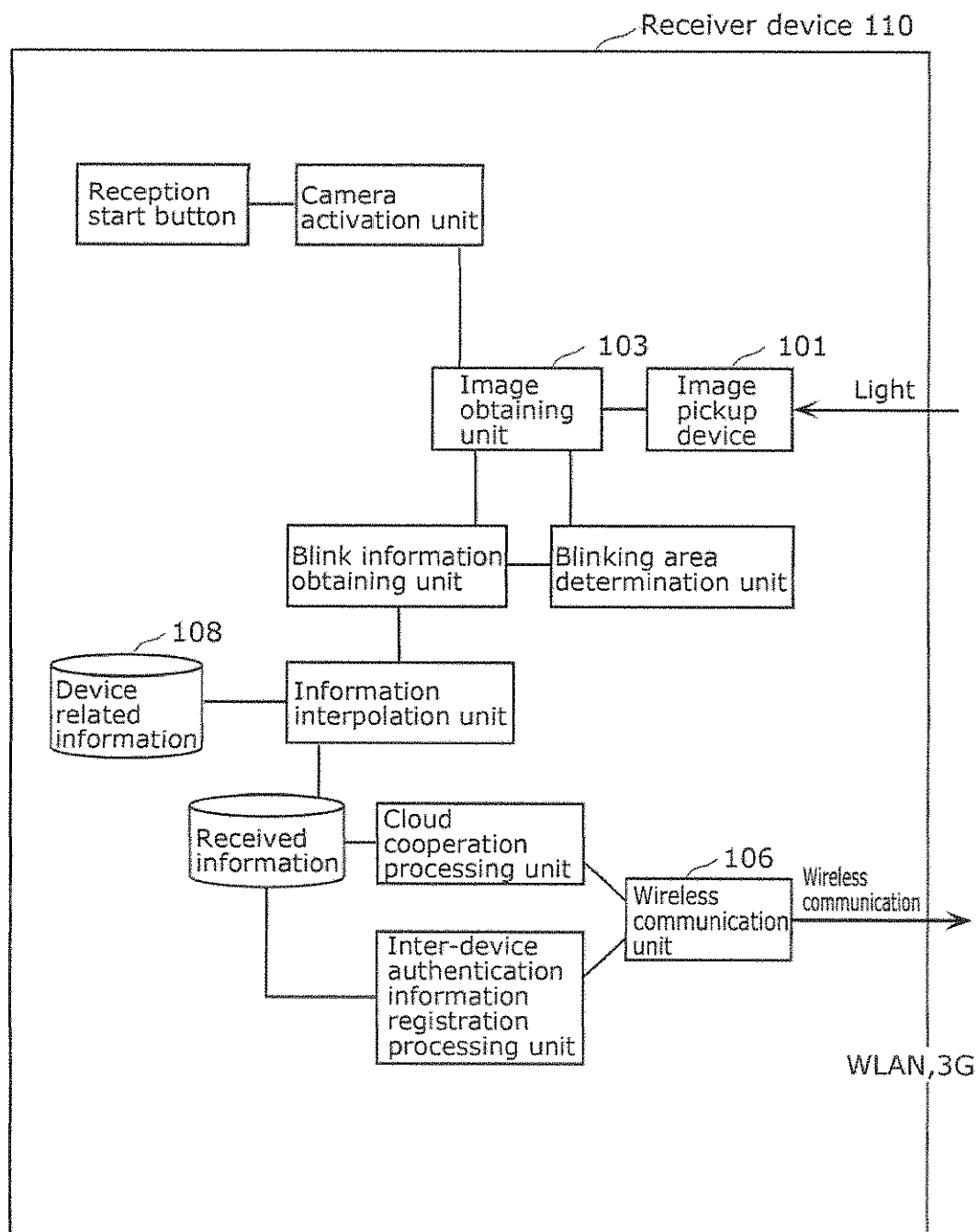


FIG. 68

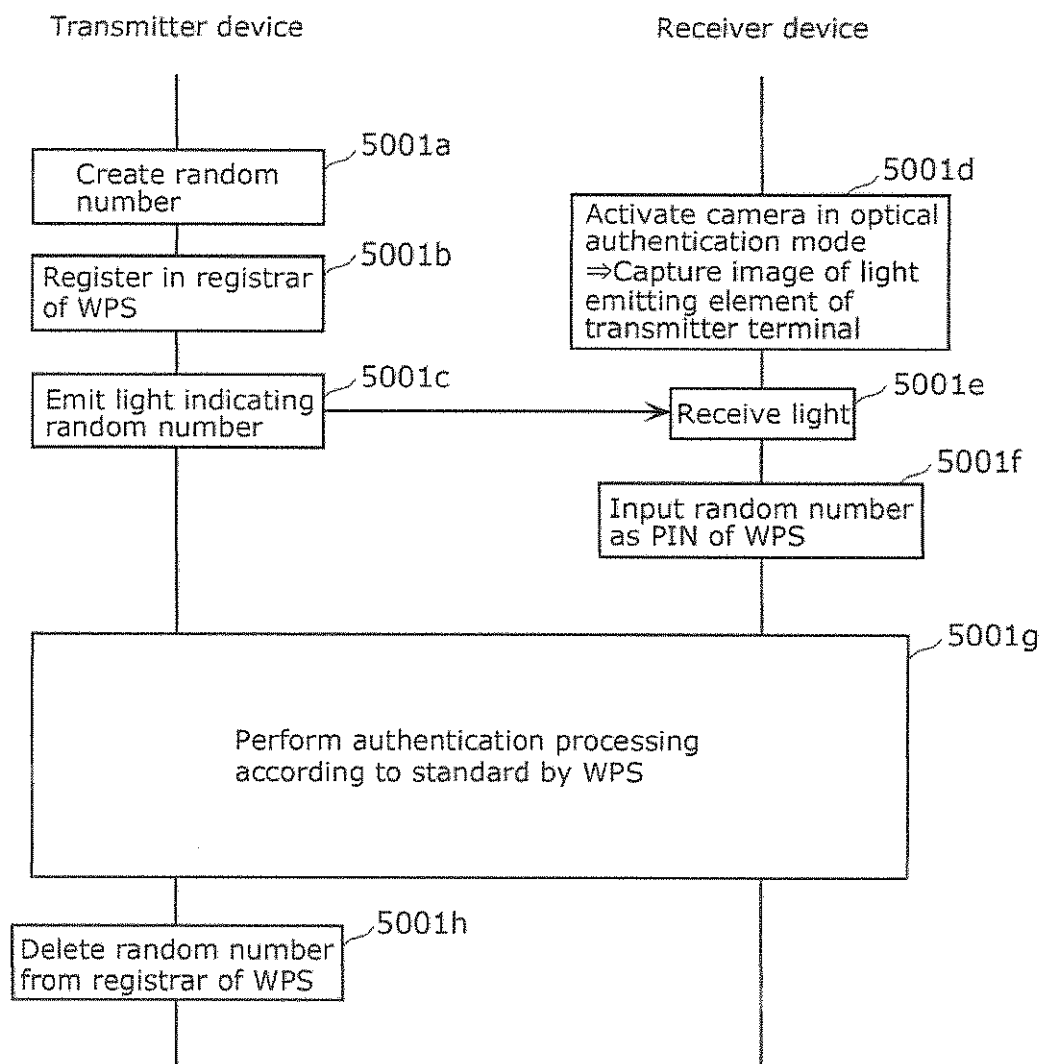


FIG. 69

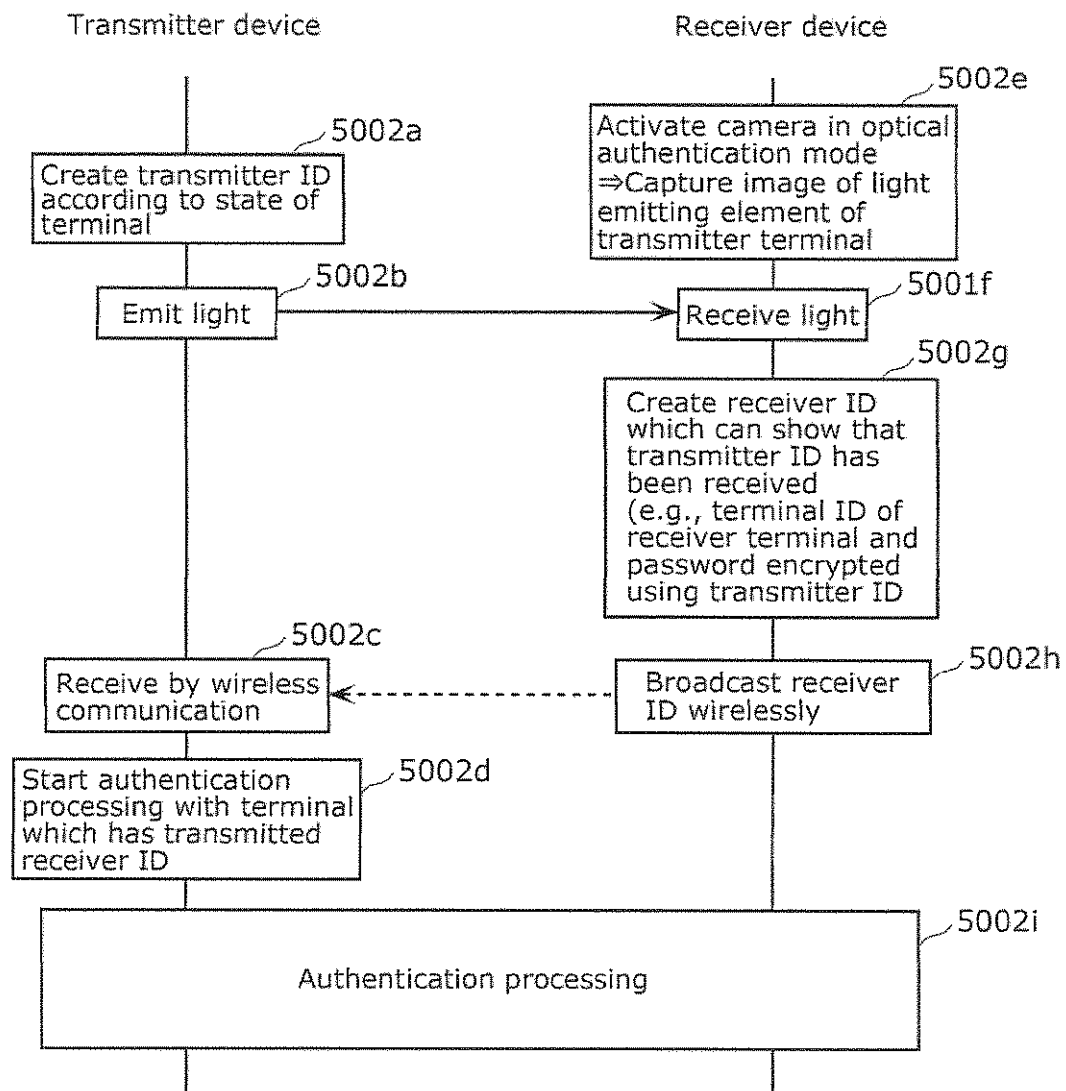


FIG. 70

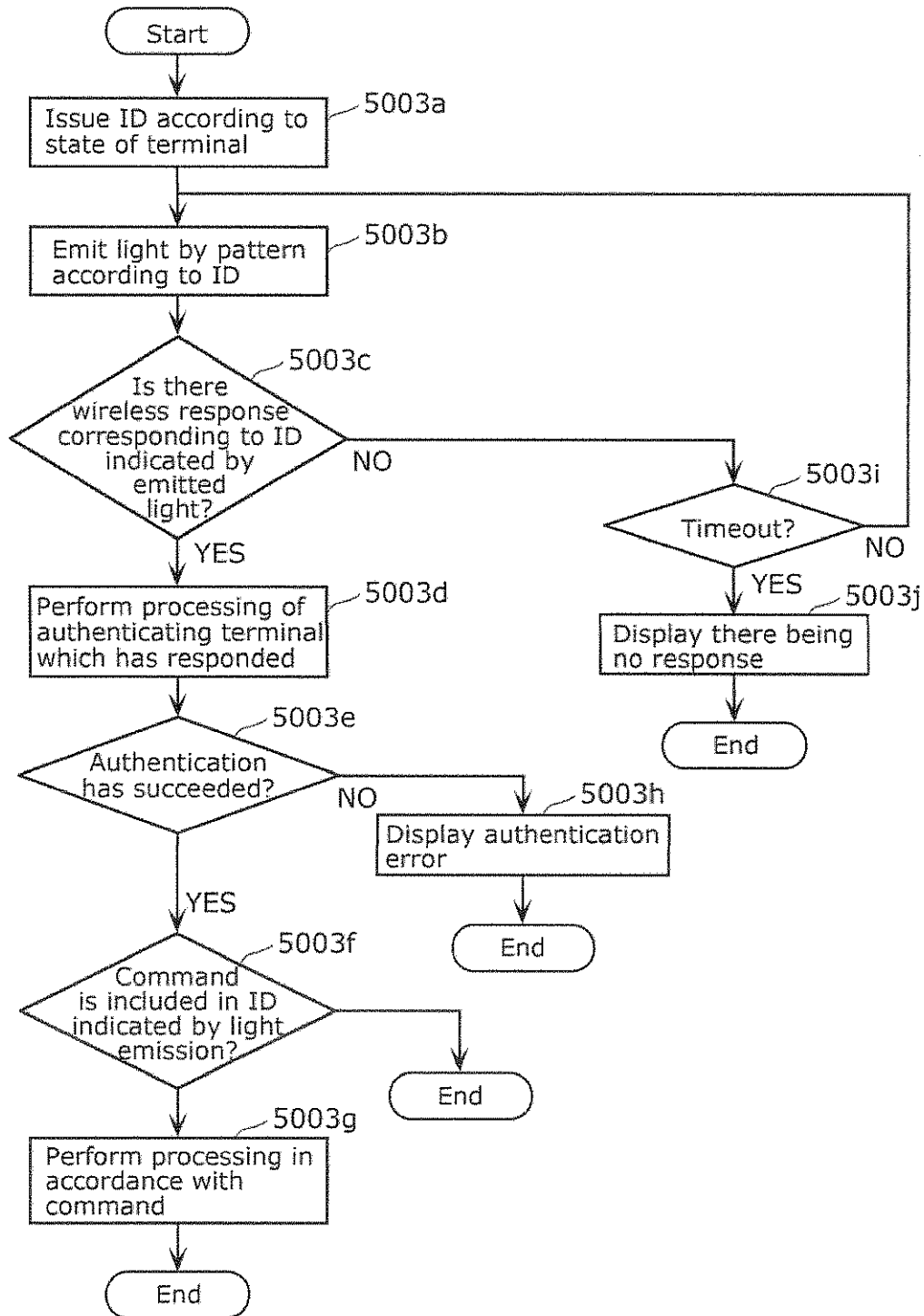


FIG. 71

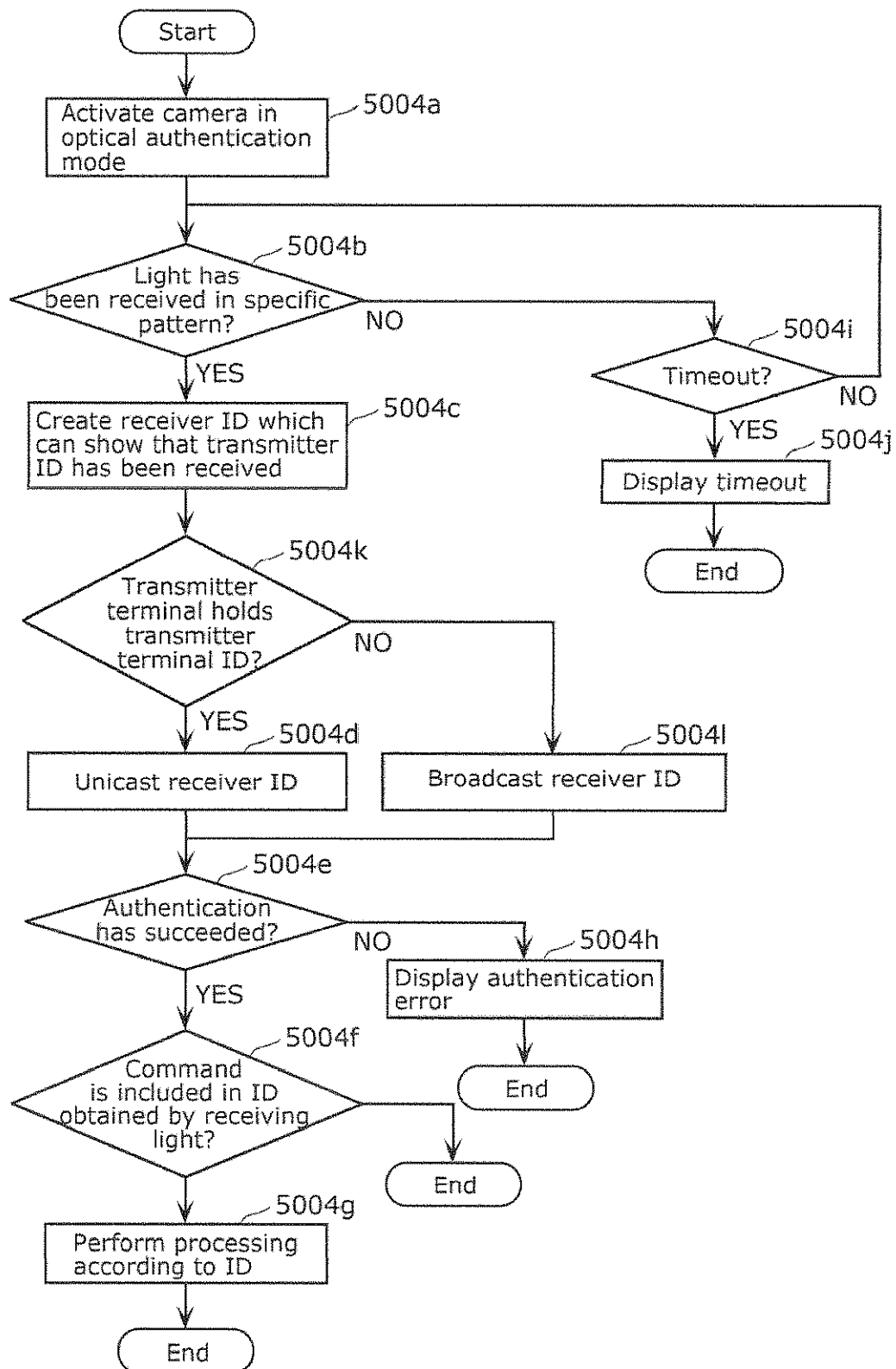


FIG. 72

Sequence diagram illustrating data transmission and reception using NFC/high speed wireless communication

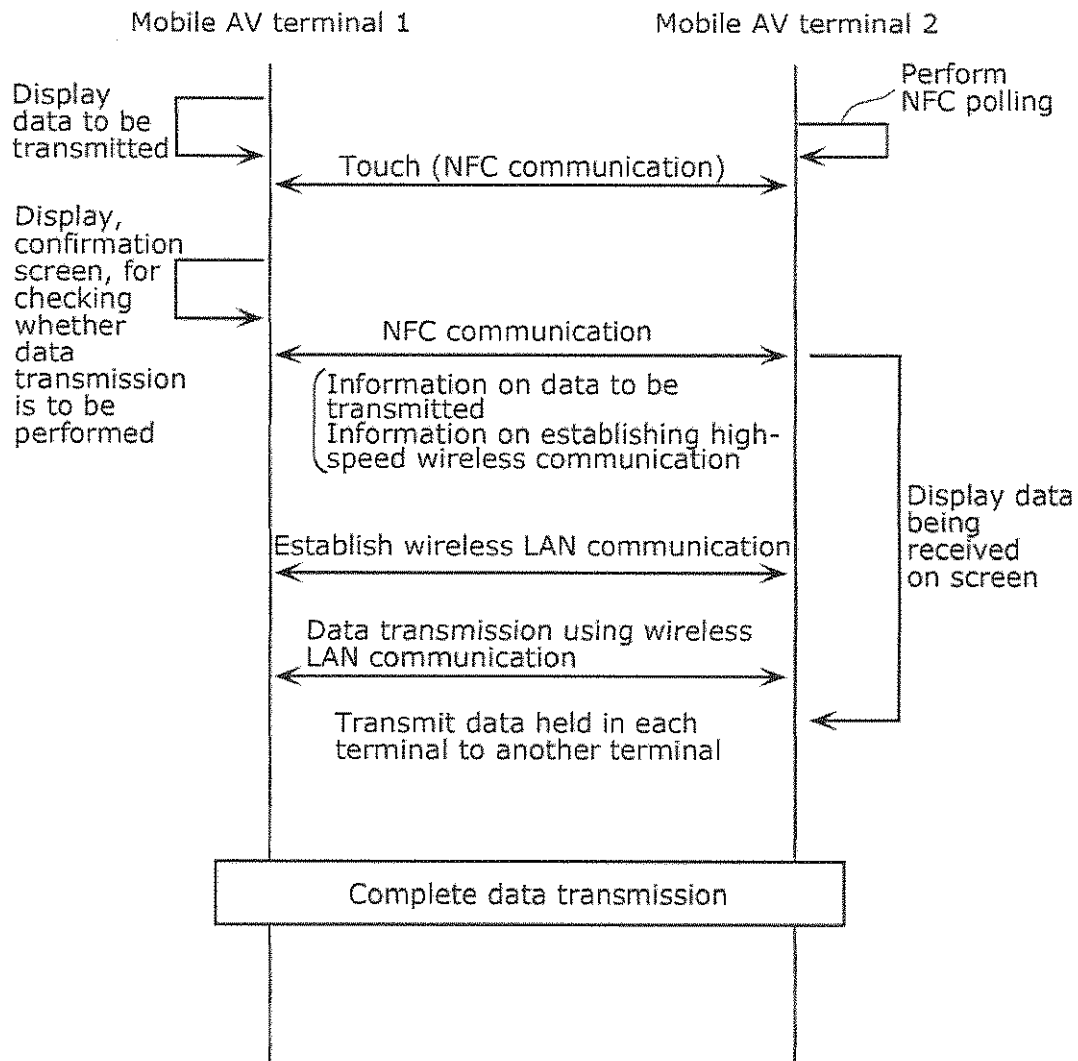


FIG. 73

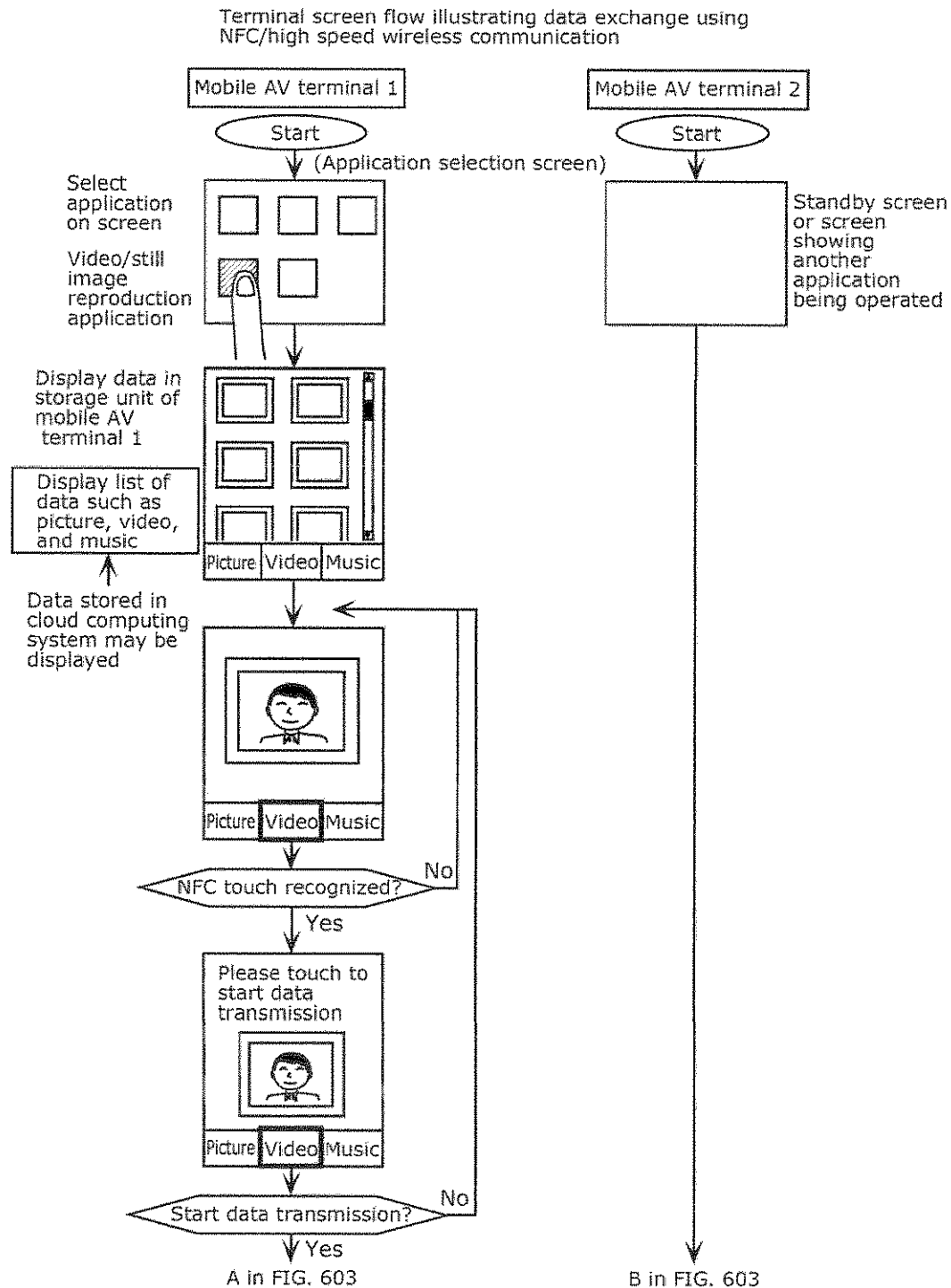


FIG. 74

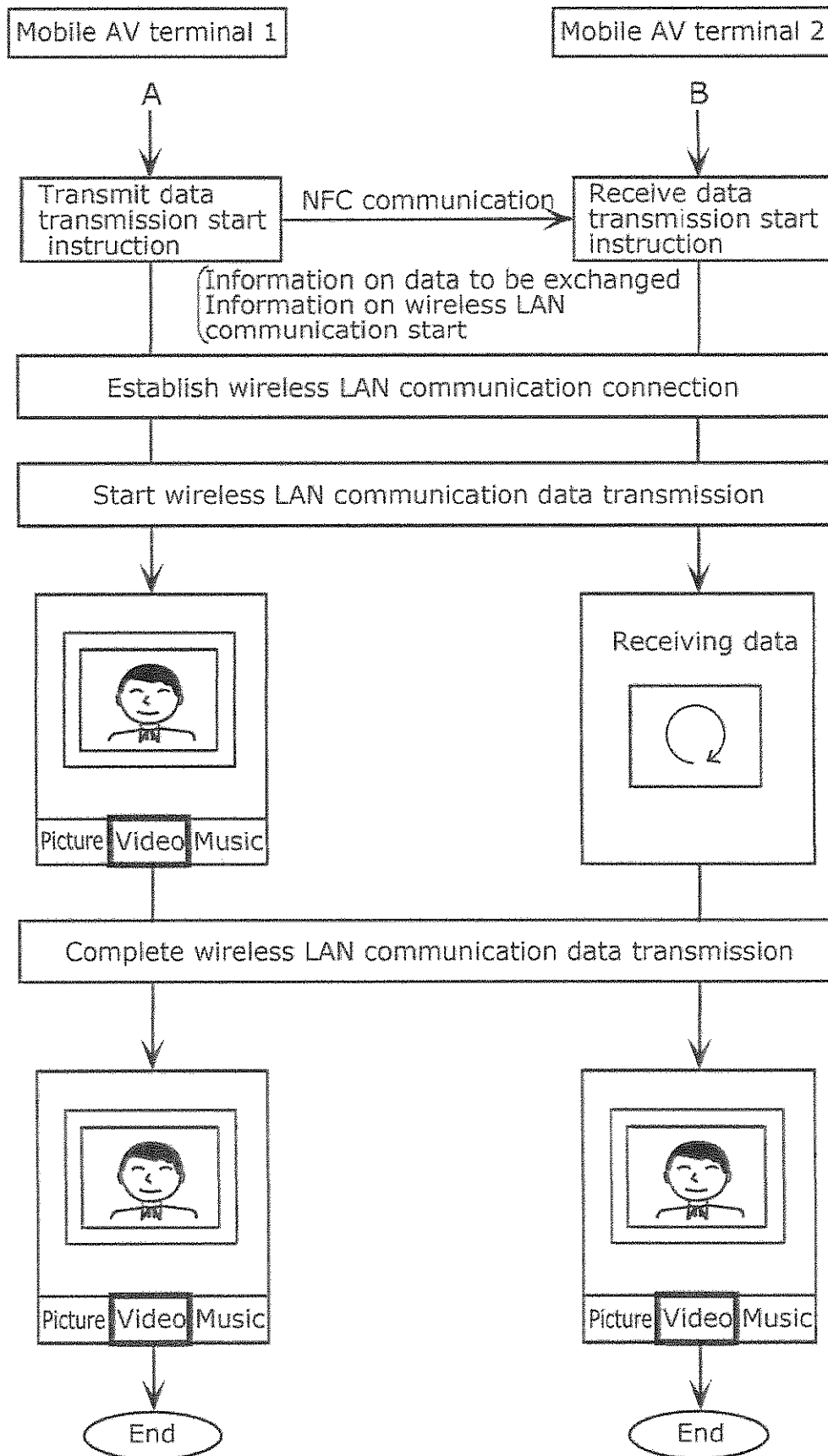


FIG. 75

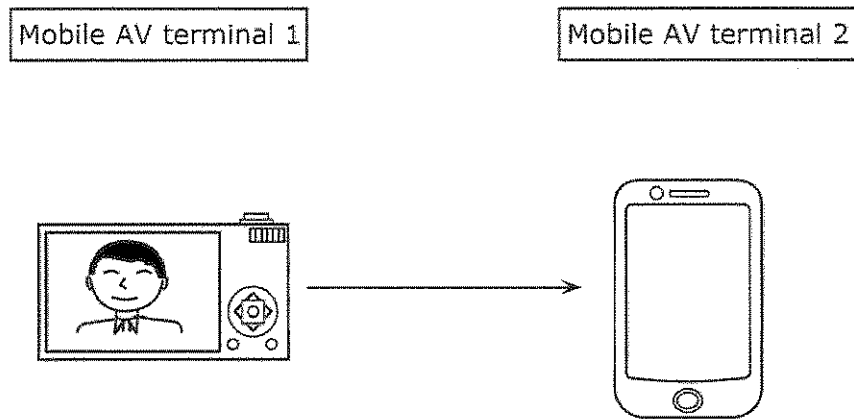


FIG. 76

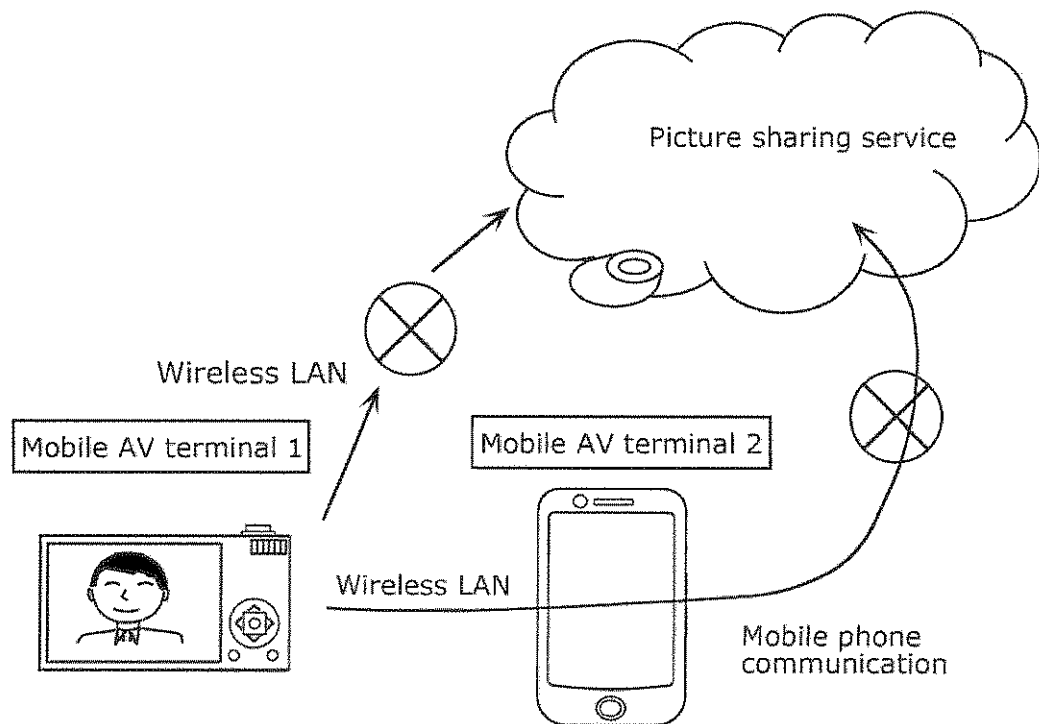


FIG. 77

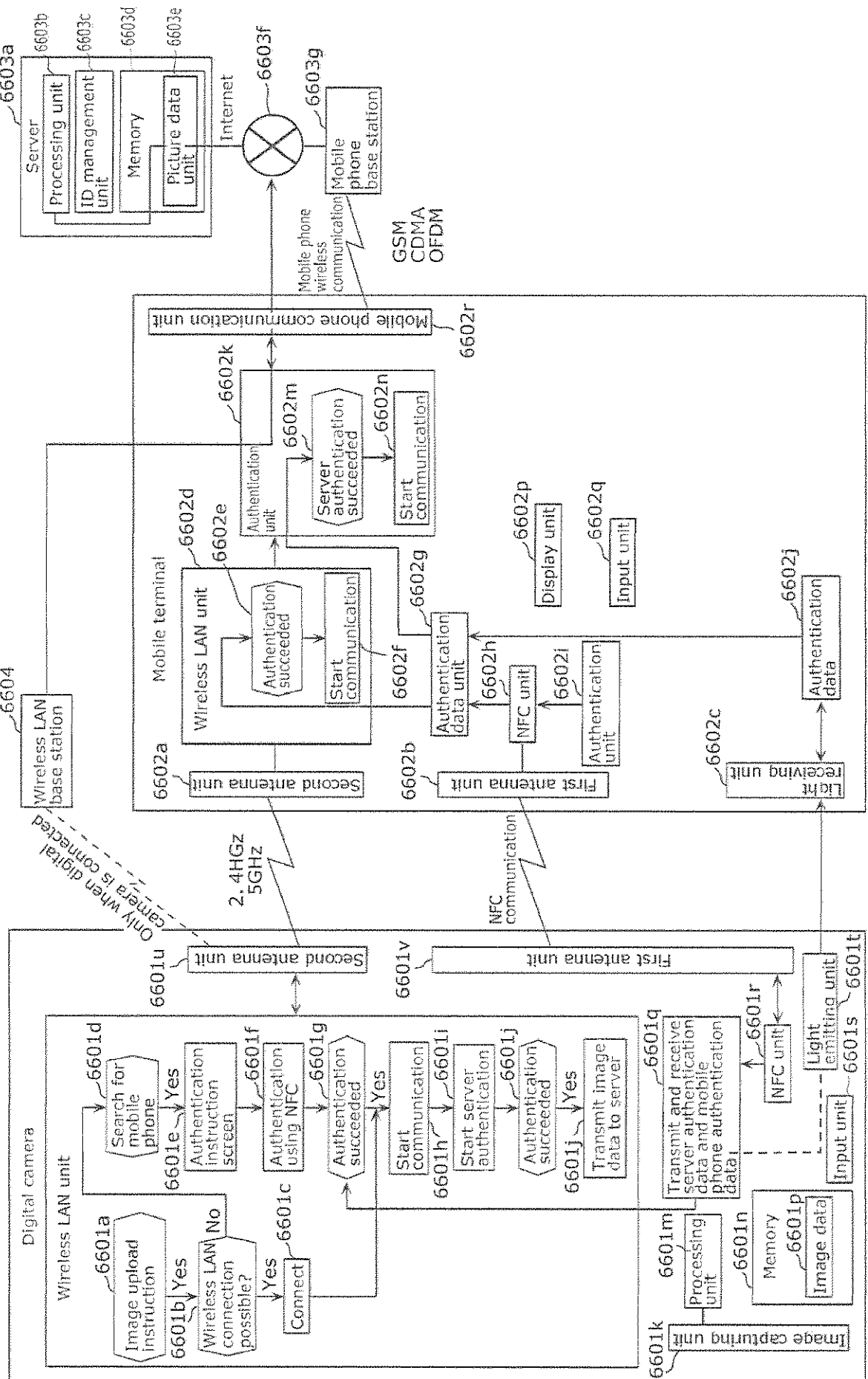


FIG. 78

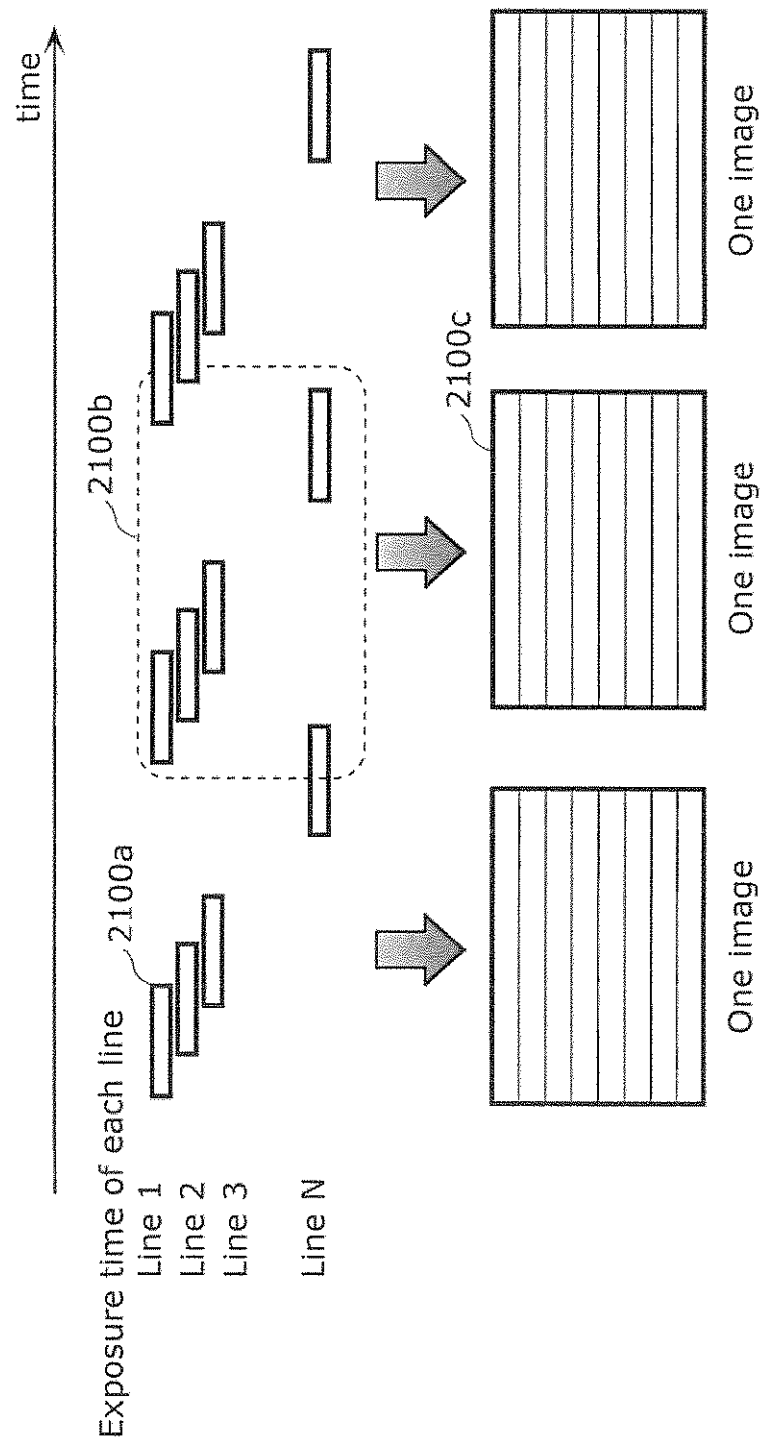
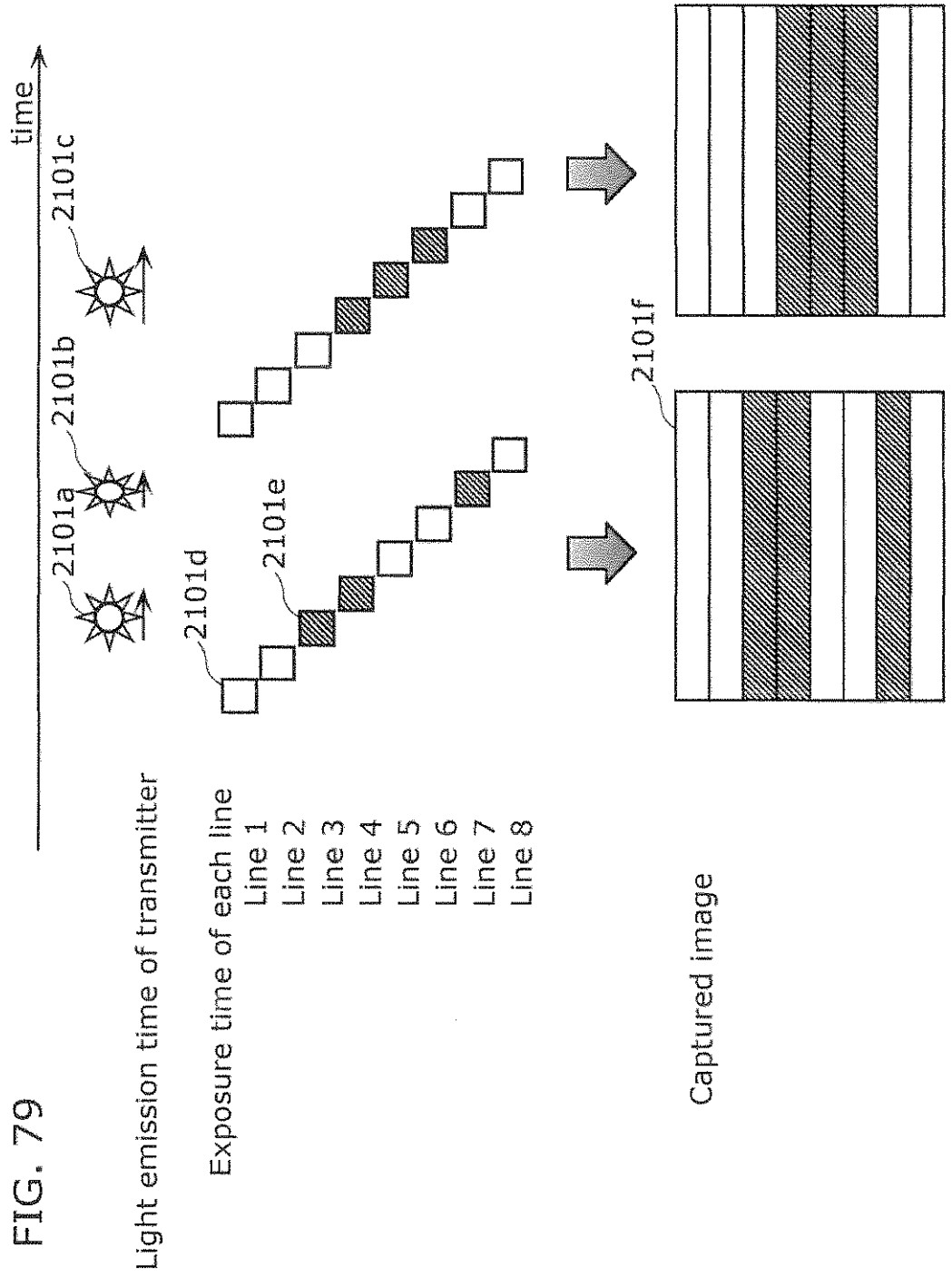


FIG. 79



time

2102b

☐

2102c

2102d

□ □



FIG. 81A

time

Light emission time of transmitter

2103a

2103b

2103c

2103d

Line 1

Line 2

Line 3

Line 4

Line 5

Line 6

Line 7

Line 8

2103e

2103f

Captured image

The diagram illustrates the timing of light emission from a transmitter and the resulting captured image. A horizontal axis at the top is labeled 'time'. Below it, two sun-like symbols represent light sources. The main part of the diagram shows a series of rectangular pulses for each of the 8 lines. The pulses are staggered in time, with Line 1 starting first and Line 8 starting last. The pulses are labeled 2103a through 2103f. The pulses for Line 1 are labeled 2103a, 2103b, 2103c, and 2103d. The pulses for Line 2 are labeled 2103b, 2103c, 2103d, and 2103e. The pulses for Line 3 are labeled 2103c, 2103d, 2103e, and 2103f. The pulses for Line 4 are labeled 2103d, 2103e, and 2103f. The pulses for Line 5 are labeled 2103e and 2103f. The pulses for Line 6 are labeled 2103f. The pulses for Line 7 and Line 8 are not shown. Two large arrows point from the pulse sequences to the captured image. The captured image is shown as a series of vertical bars with different patterns: Line 1 (diagonal lines), Line 2 (horizontal lines), Line 3 (vertical lines), Line 4 (diagonal lines), Line 5 (horizontal lines), Line 6 (vertical lines), Line 7 (diagonal lines), and Line 8 (horizontal lines). The captured image is labeled 2103e and 2103f.

FIG. 81B

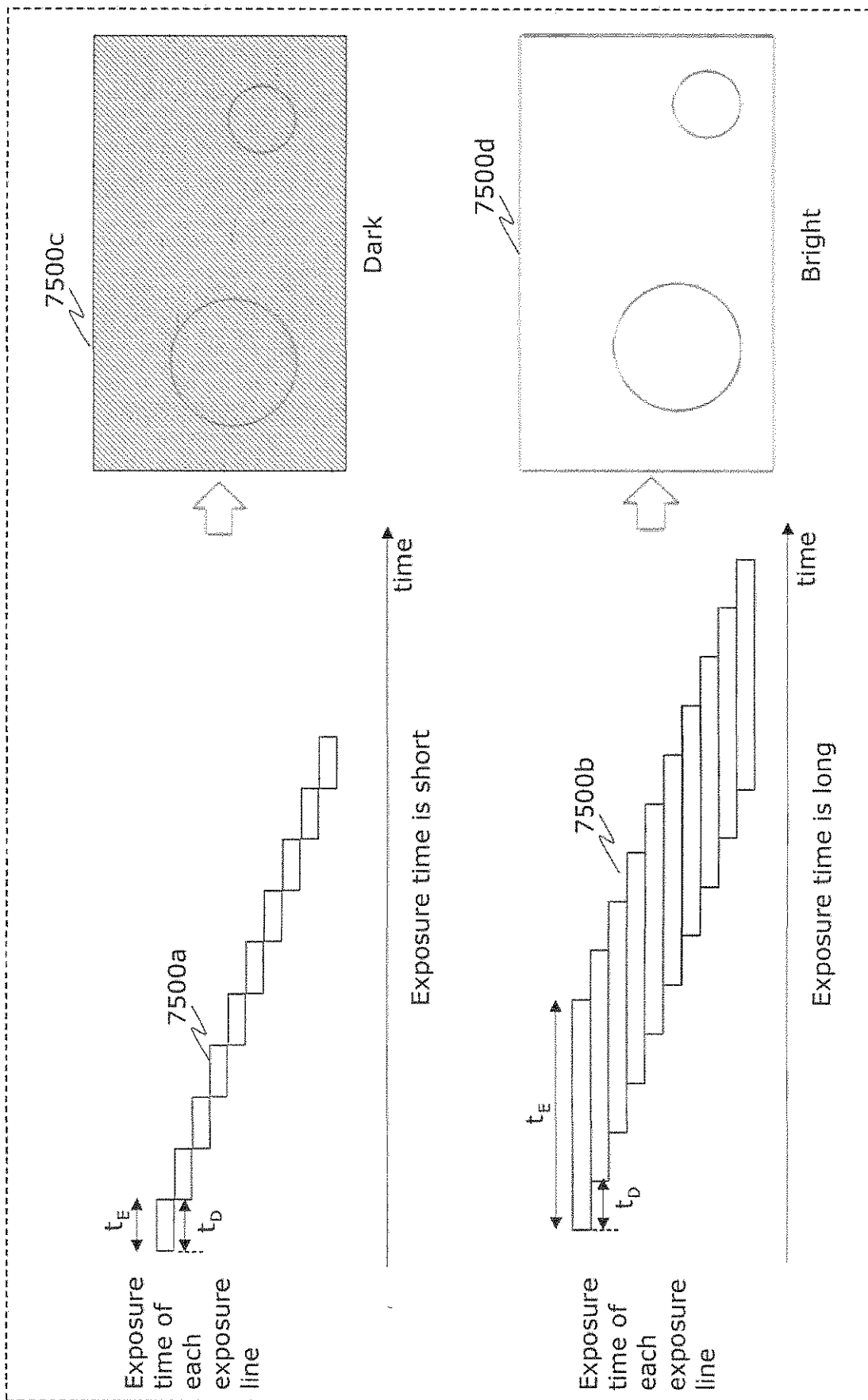


FIG. 81C

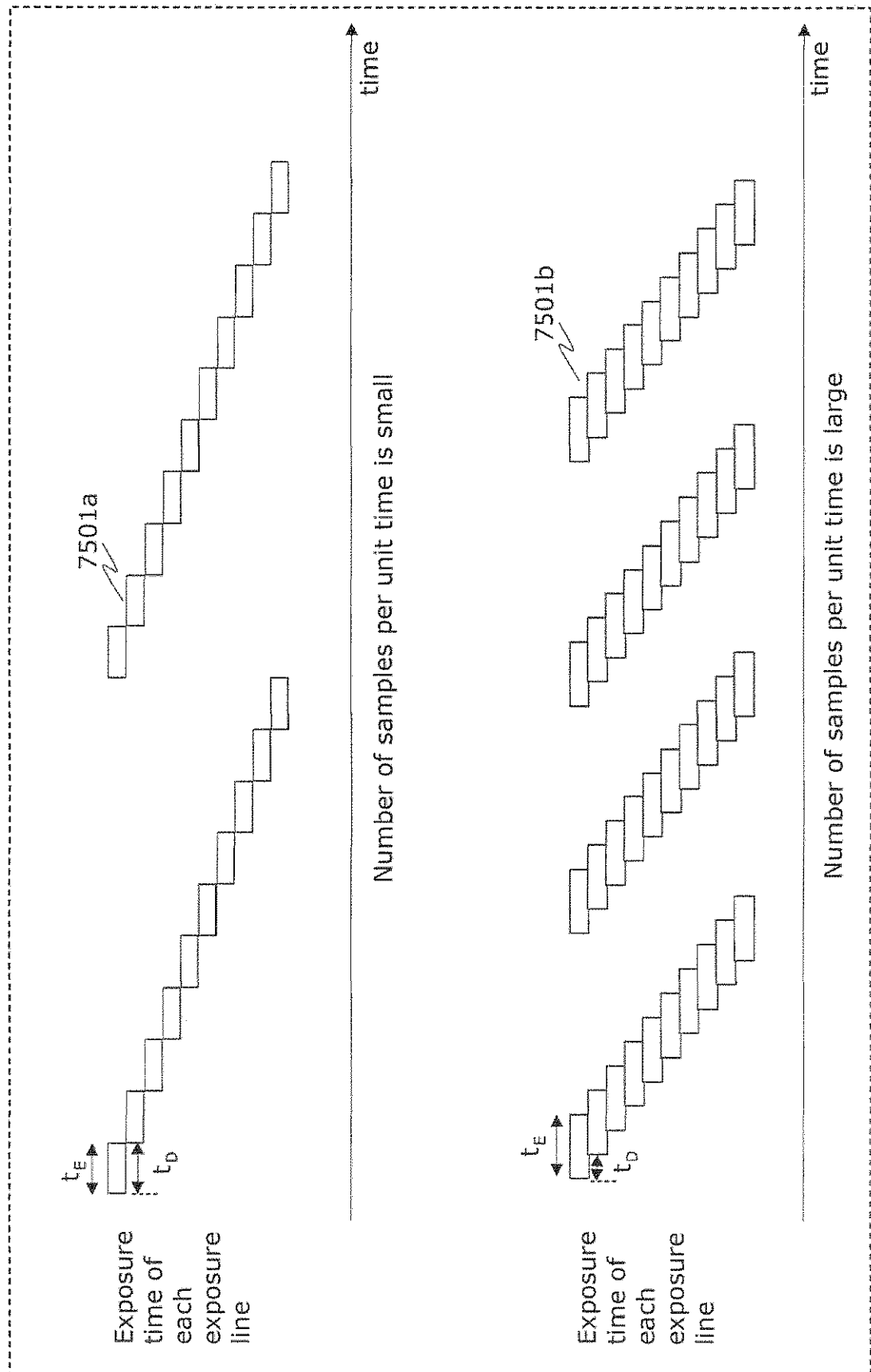


FIG. 81D

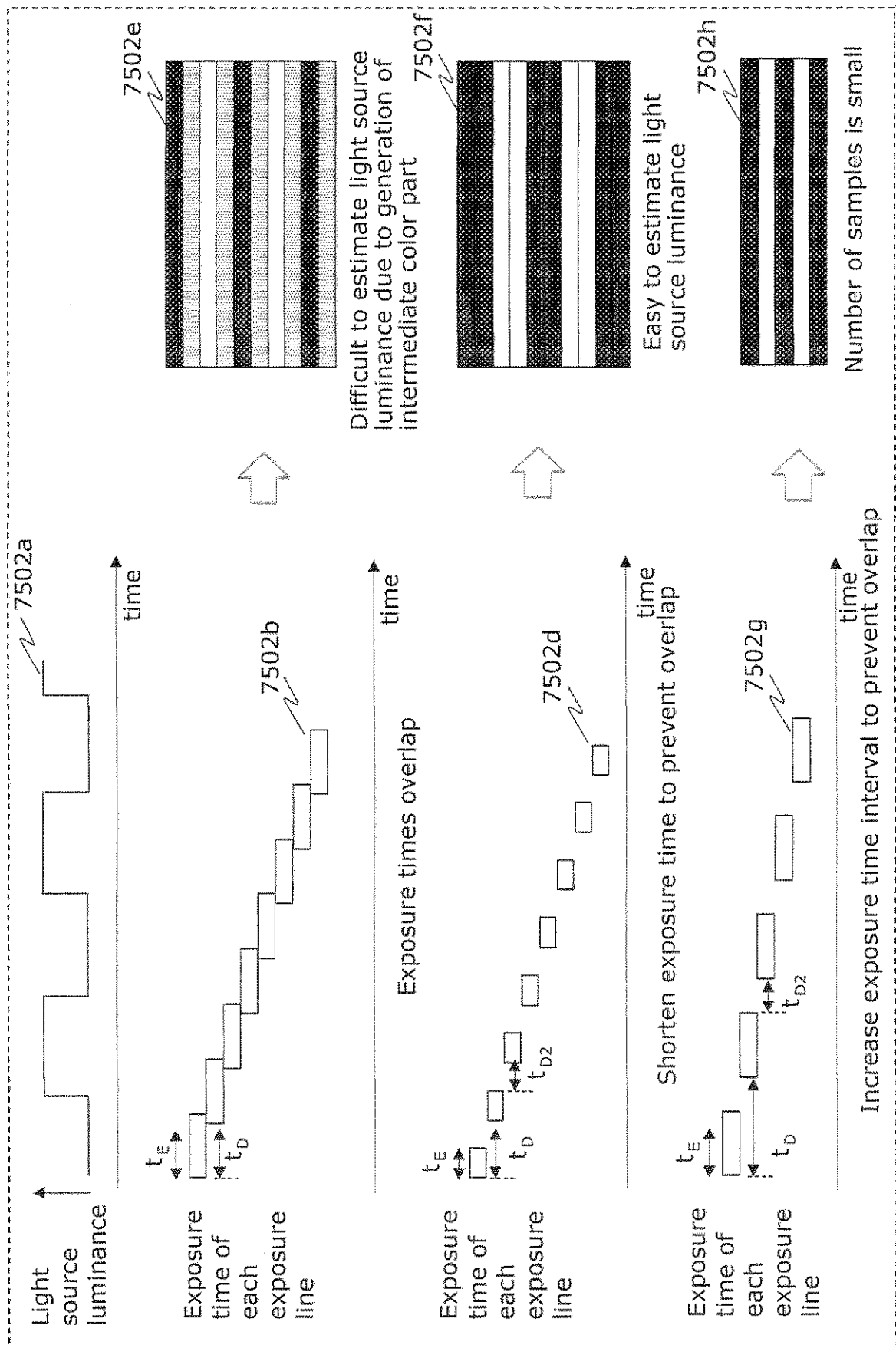


FIG. 81E

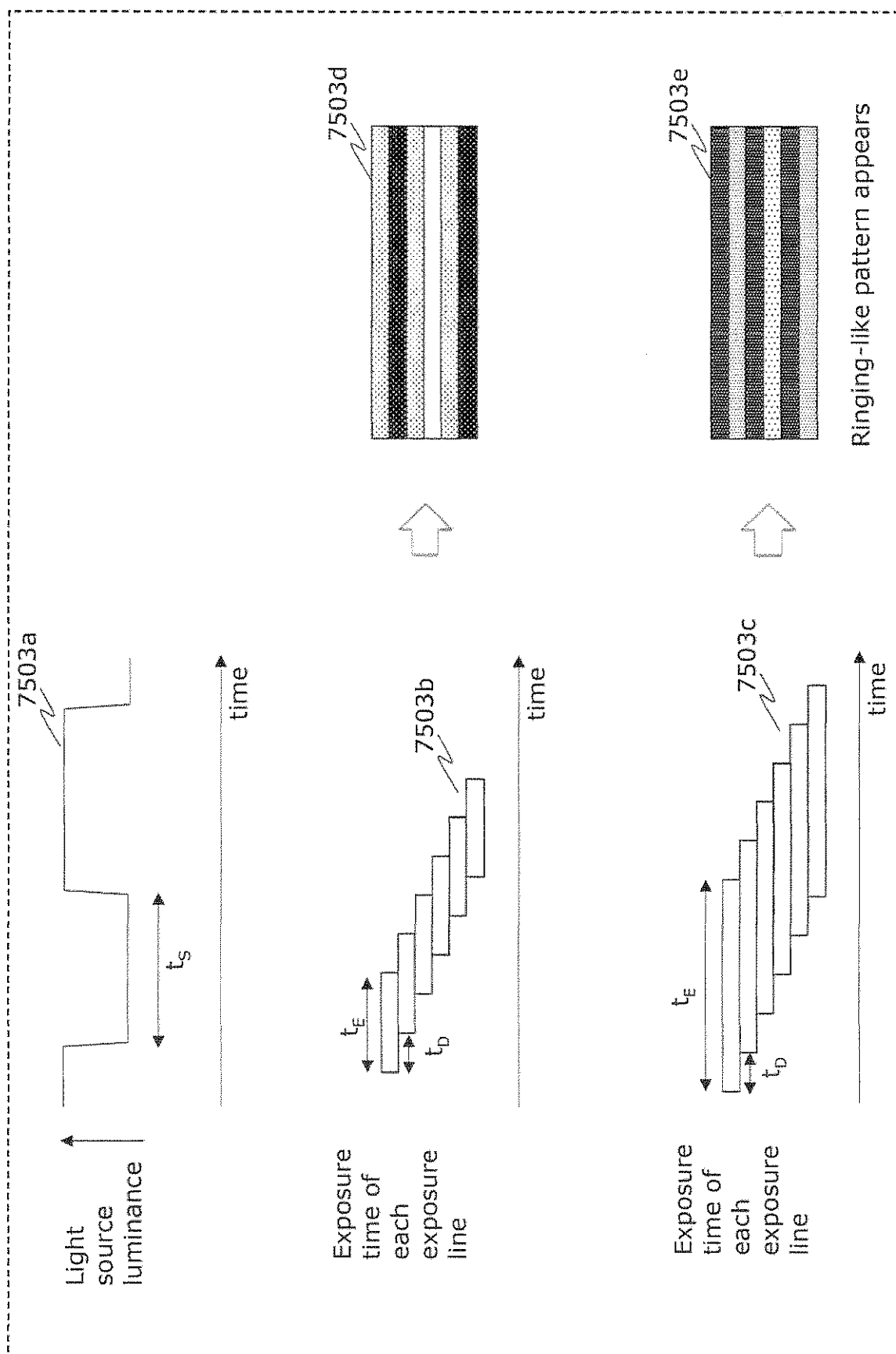


FIG. 81F

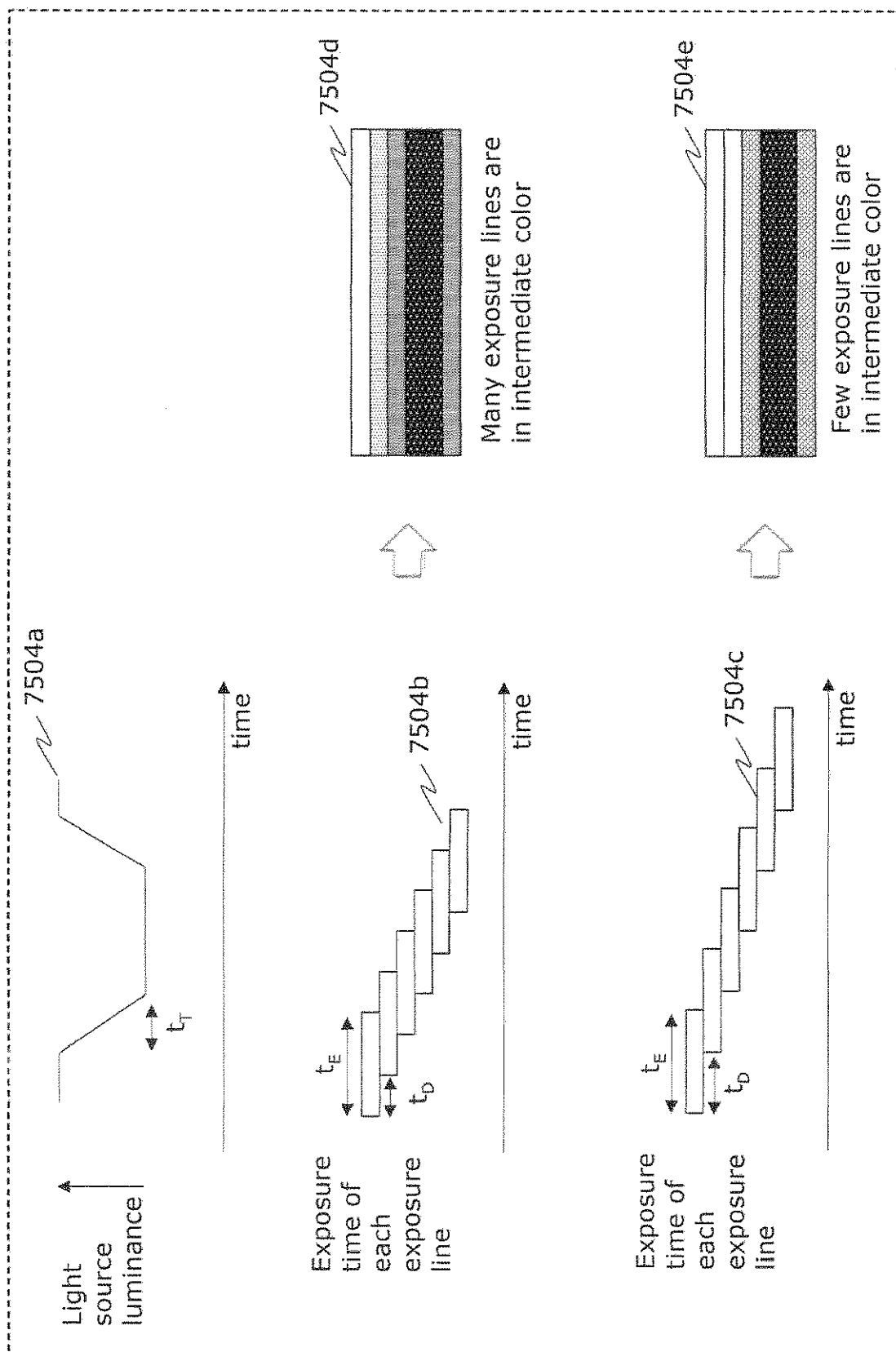


FIG. 81G

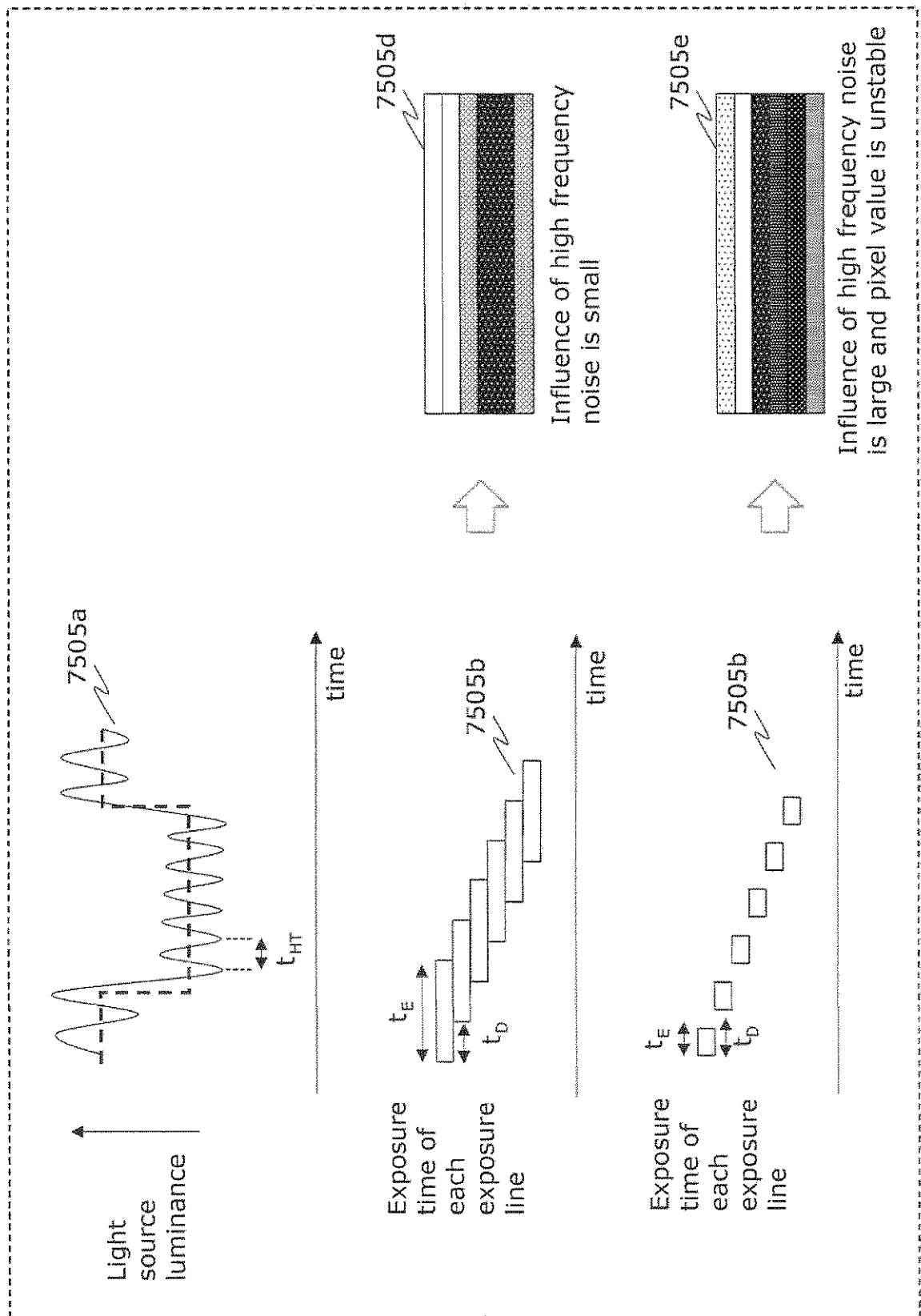


FIG. 81H

When $t_{HT} = 20$ microseconds

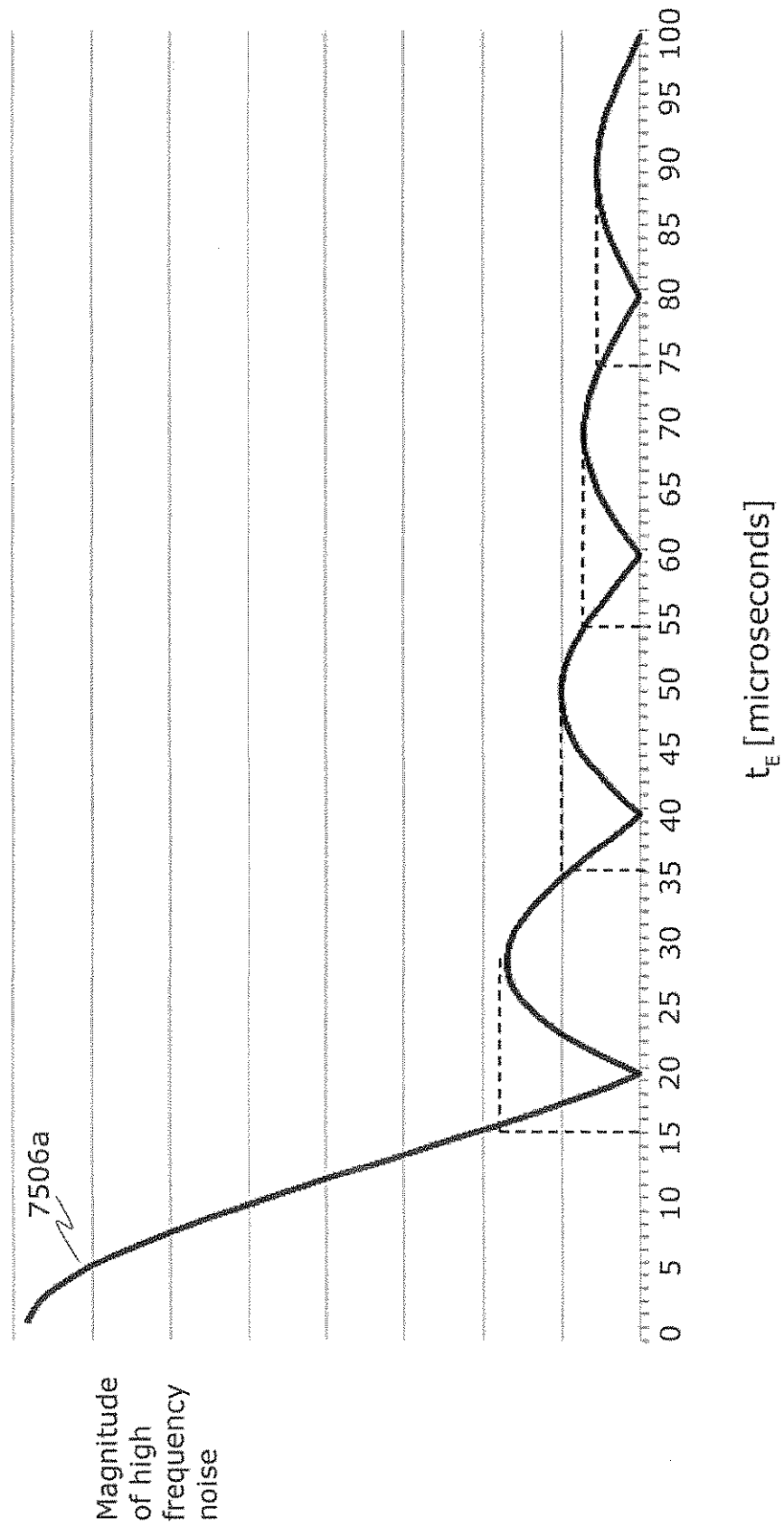


FIG. 81I

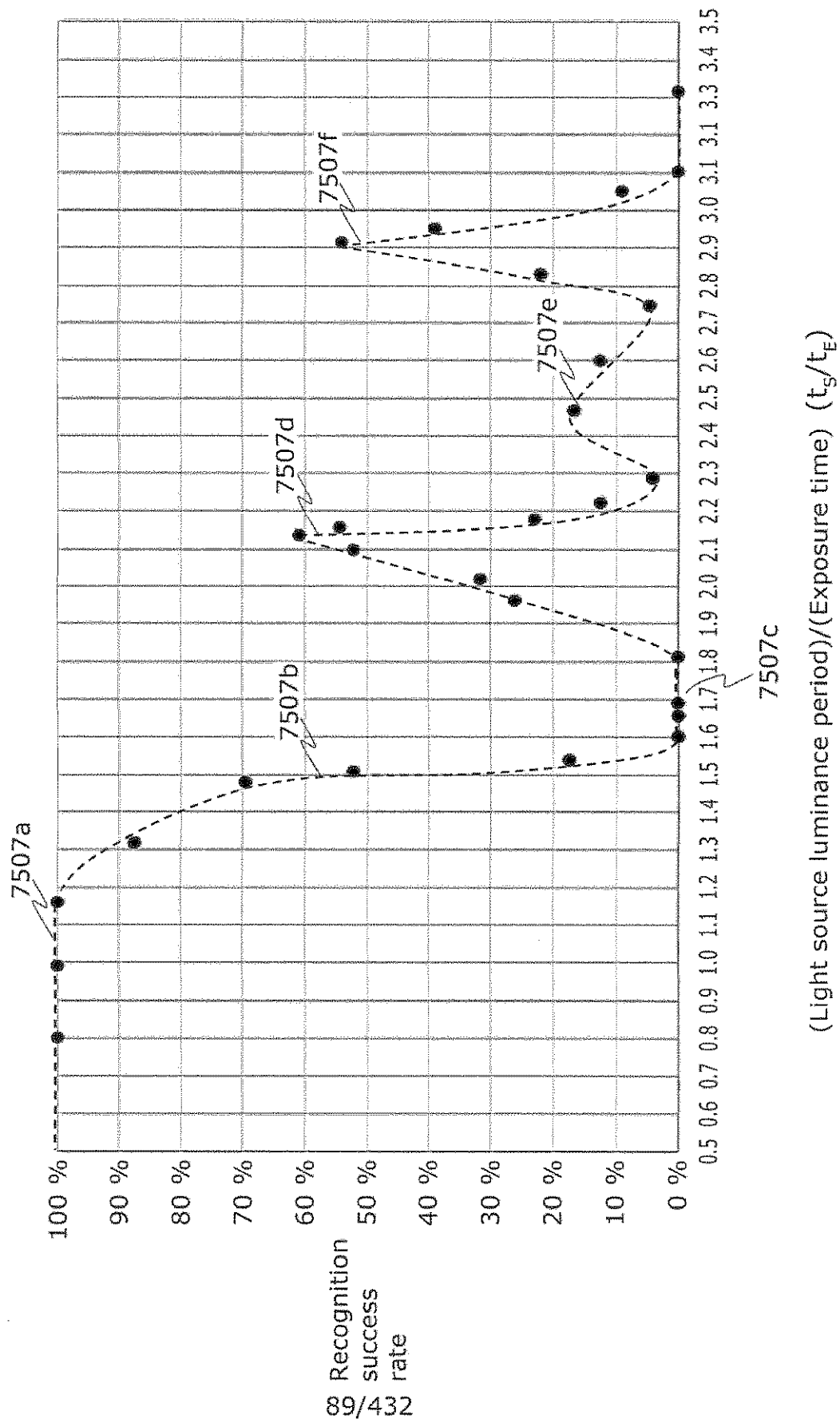


FIG. 82

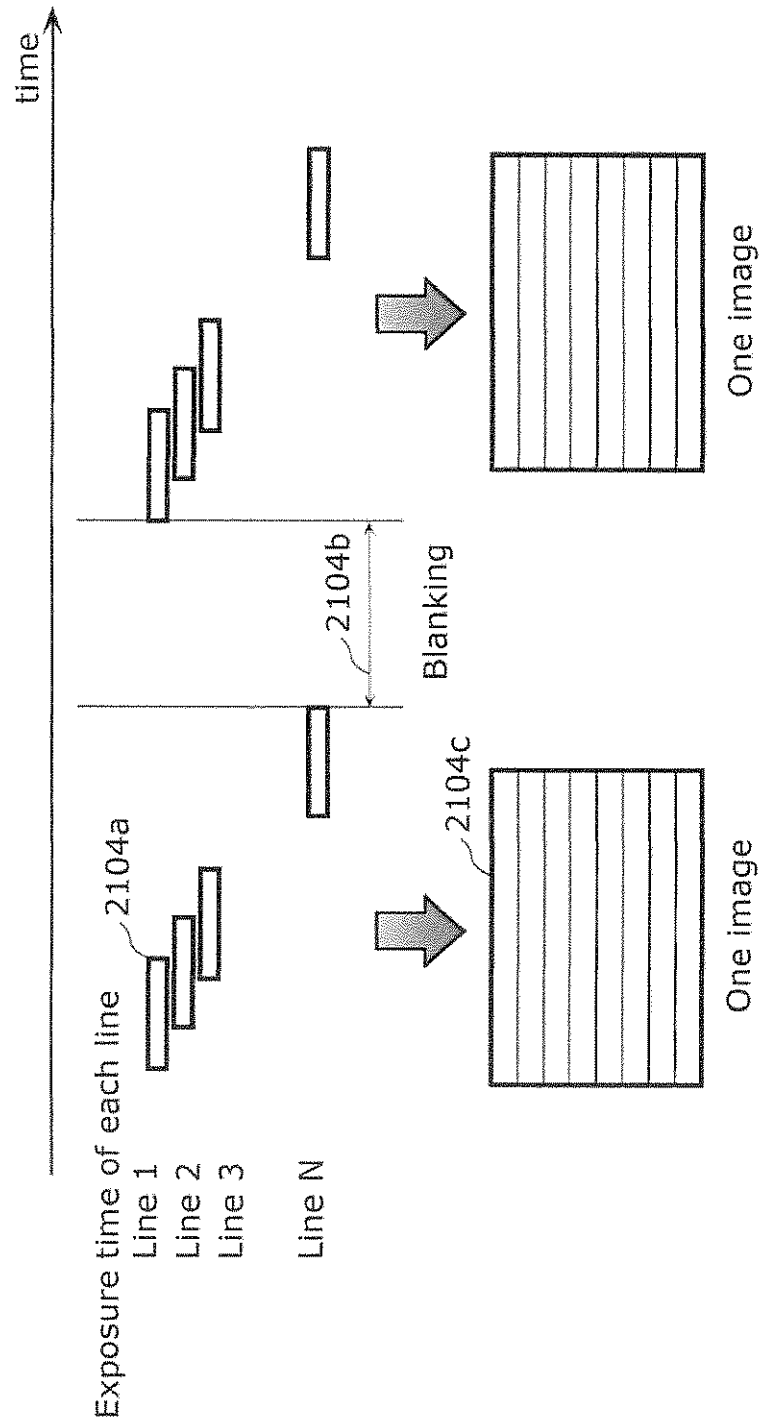


FIG. 83

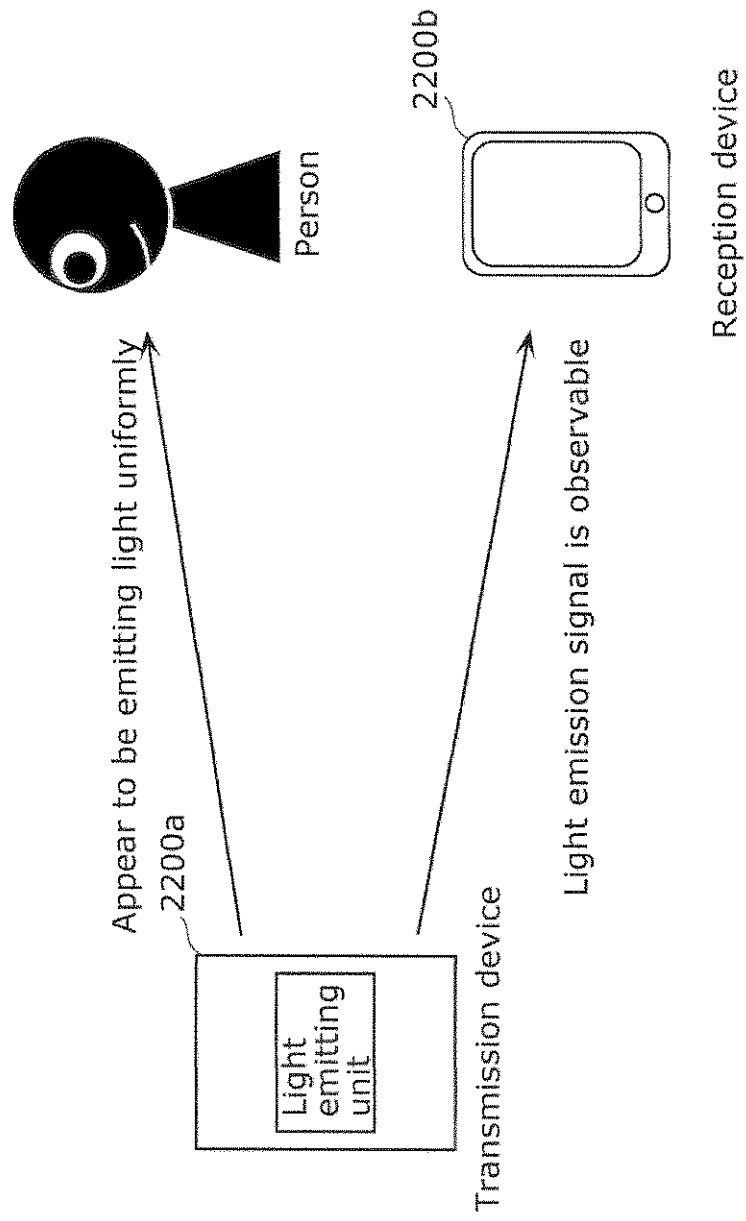


FIG. 84

2200.1a

Transmission signal	Modulated signal
0	01
1	10

FIG. 85

2200.2a

Transmission signal	Modulated signal
00 (0)	0111
01 (1)	1011
10 (2)	1101
11 (3)	1110

FIG. 86

2200.3a

Transmission signal	Modulated signal
000 (0)	01111111
001 (1)	10111111
010 (2)	11011111
011 (3)	11101111
100 (4)	11110111
101 (5)	11111011
110 (6)	11111101
111 (7)	11111110

FIG. 87

2200.4a

Transmission signal	Modulated signal
00 (0)	1000
01 (1)	0100
10 (2)	0010
11 (3)	0001

FIG. 88

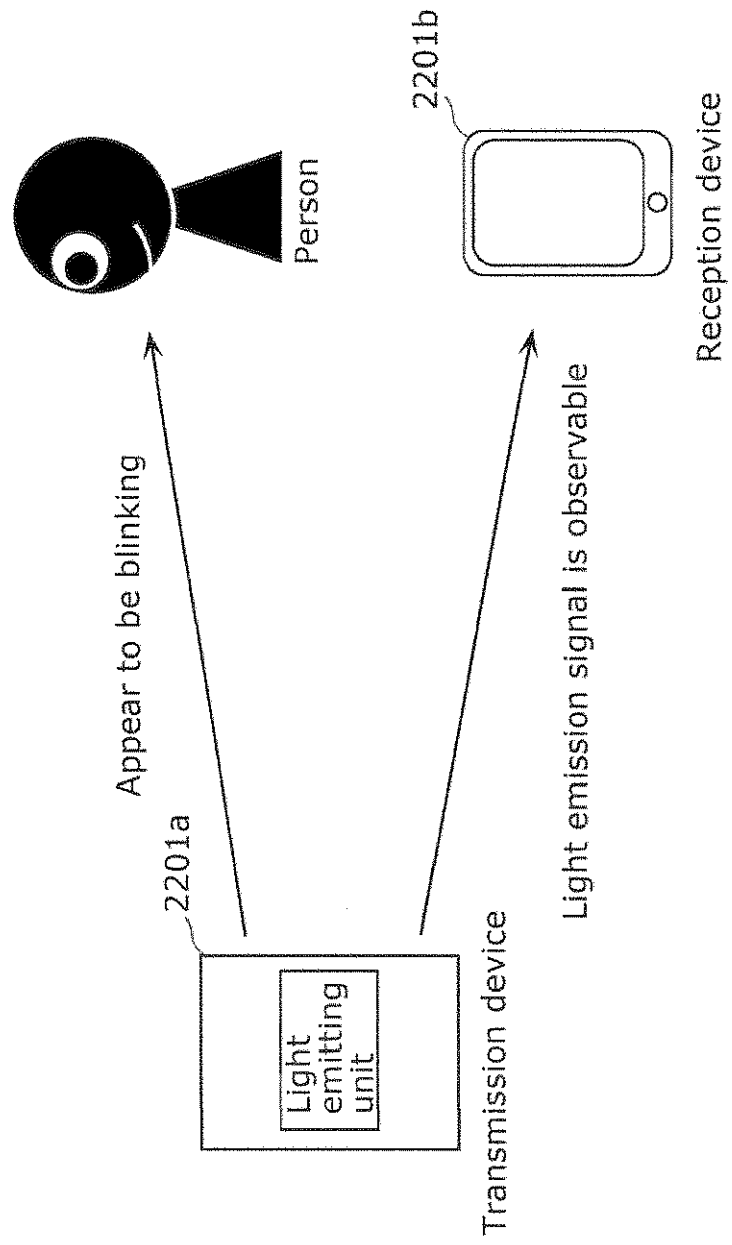


FIG. 89

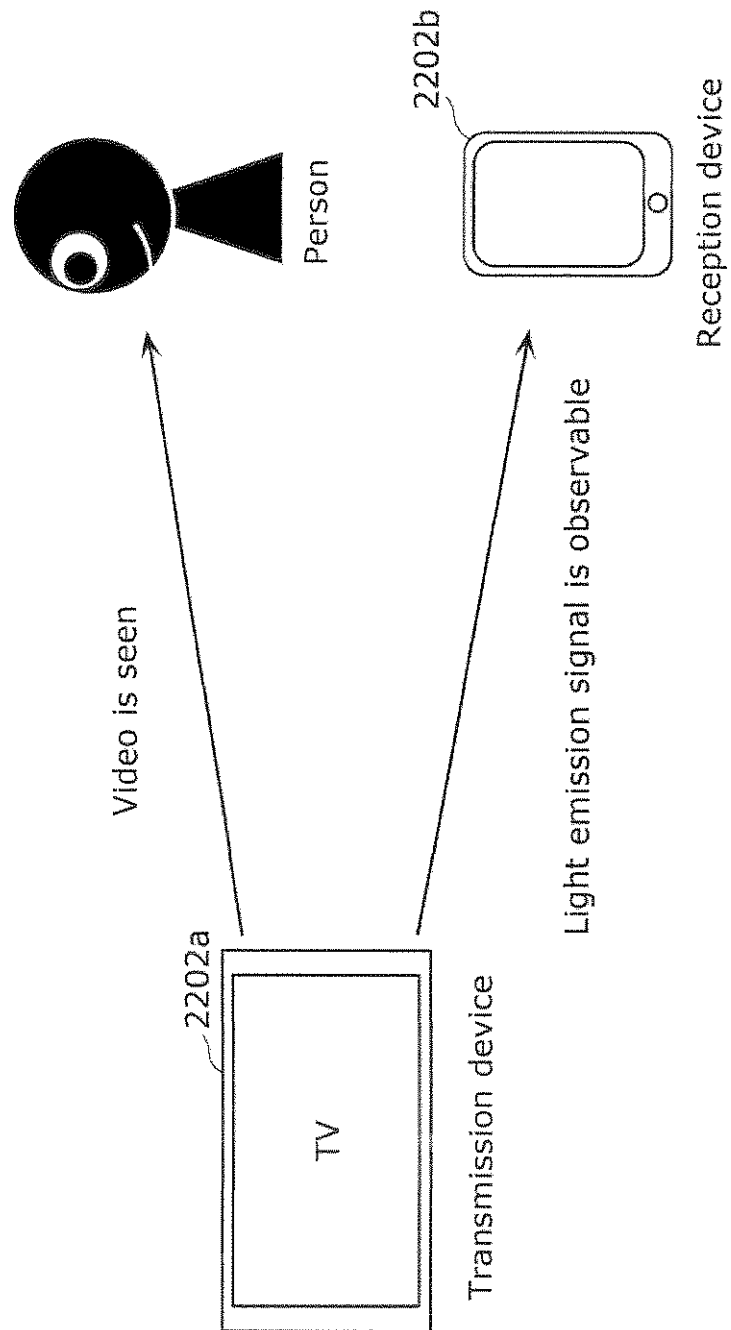


FIG. 90

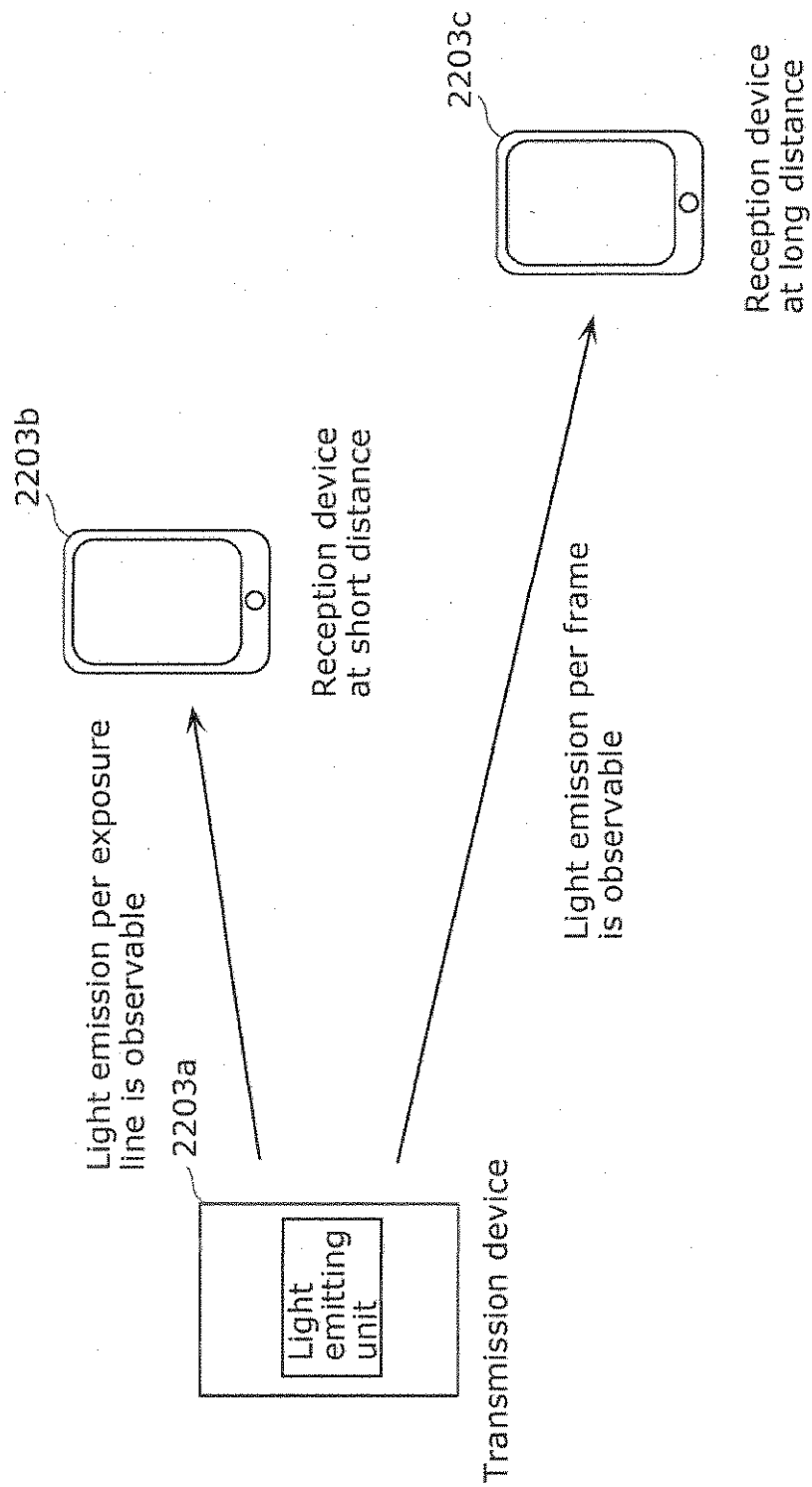


FIG. 91

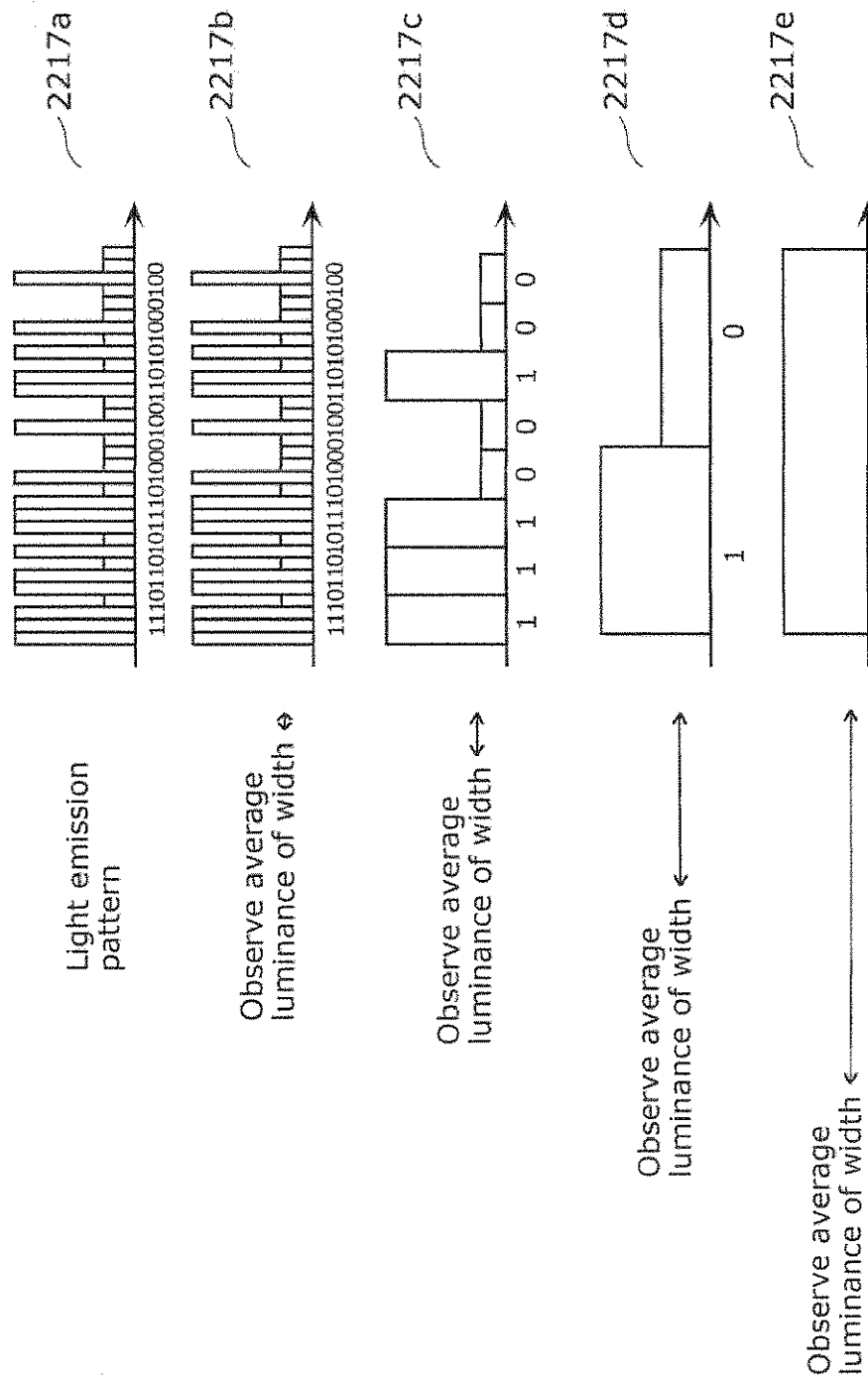


FIG. 92

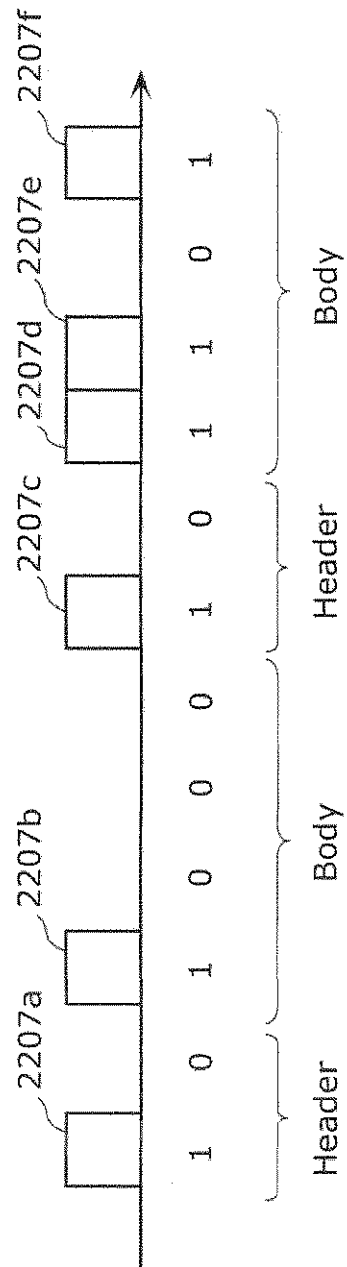


FIG. 93

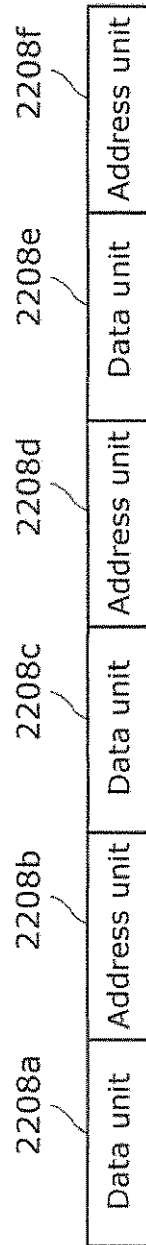


FIG. 94

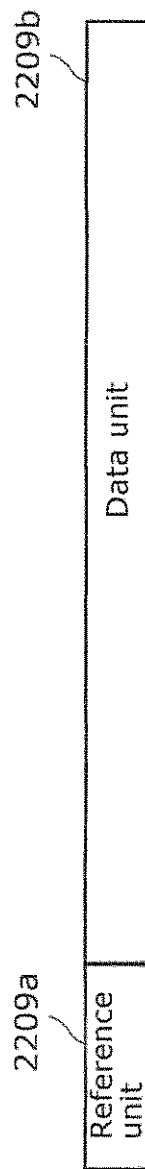


FIG. 95

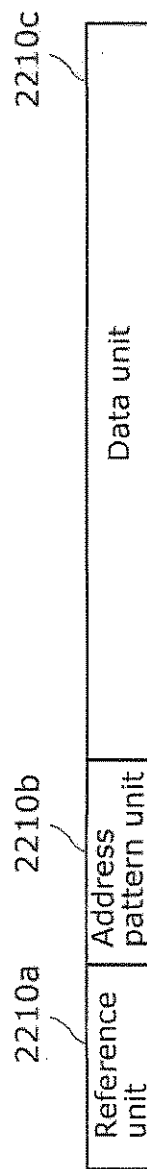


FIG. 96

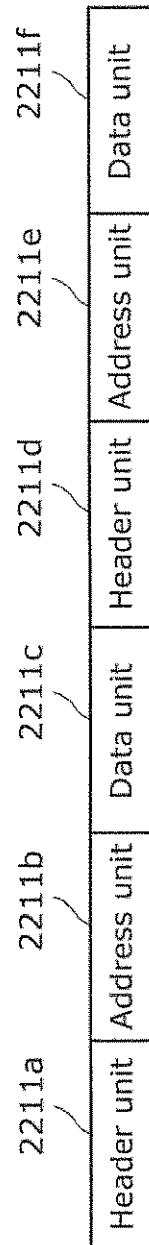


FIG. 97

Transmission information	Priority
Information 1	3 (High)
Information 2	2 (Normal)
Information 3	1 (Low)

Transmission order 1

Information 1	Information 1	Information 1	Information 1	Information 1	Information 1	Information 2	Information 2	Information 2	Information 2	Information 3	Information 3	Information 3
---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------

Transmission order 2

Information 1	Information 2	Information 1	Information 3	Information 1	Information 2	Information 1	Information 2	Information 1	Information 3	Information 1	Information 2	Information 1
---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------



FIG. 98

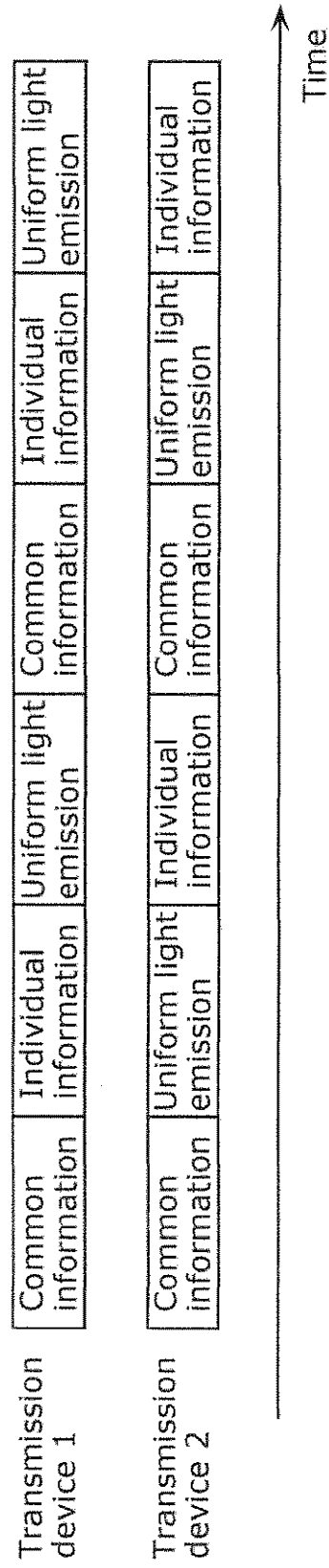


FIG. 99

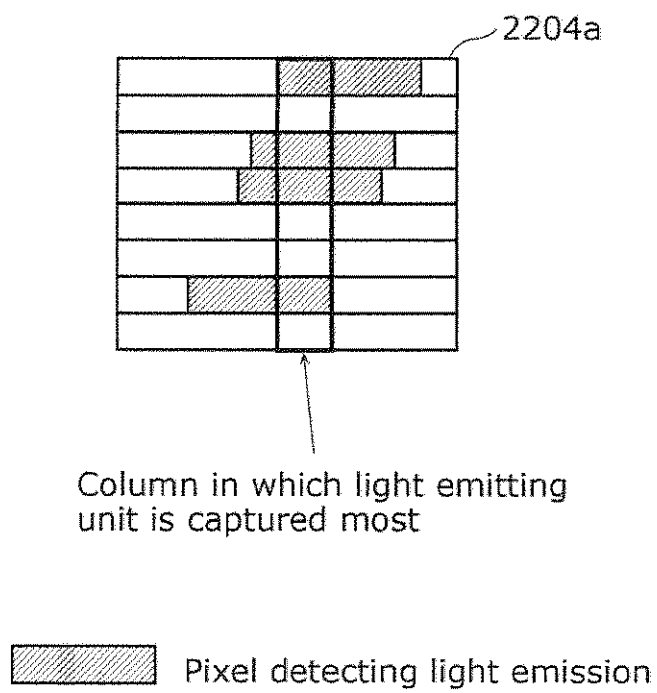
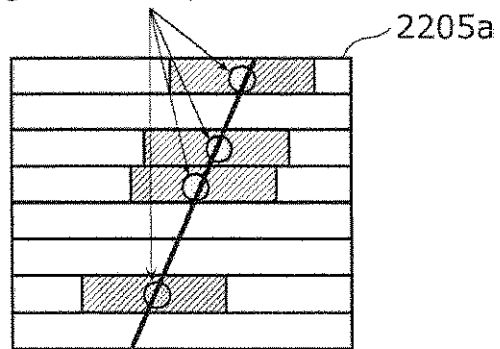


FIG. 100

Midpoint of captured part of light
emitting unit in exposure line



Line approximating midpoints

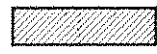
 Pixel detecting light emission

FIG. 101

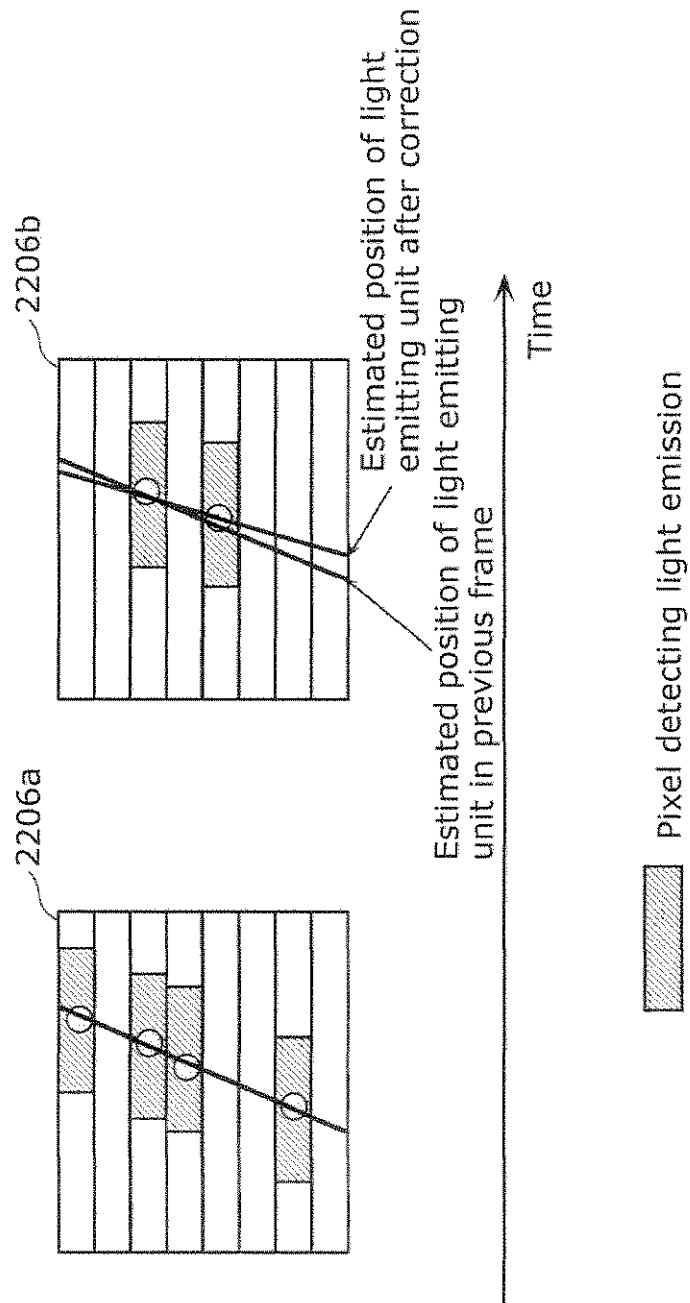


FIG. 102

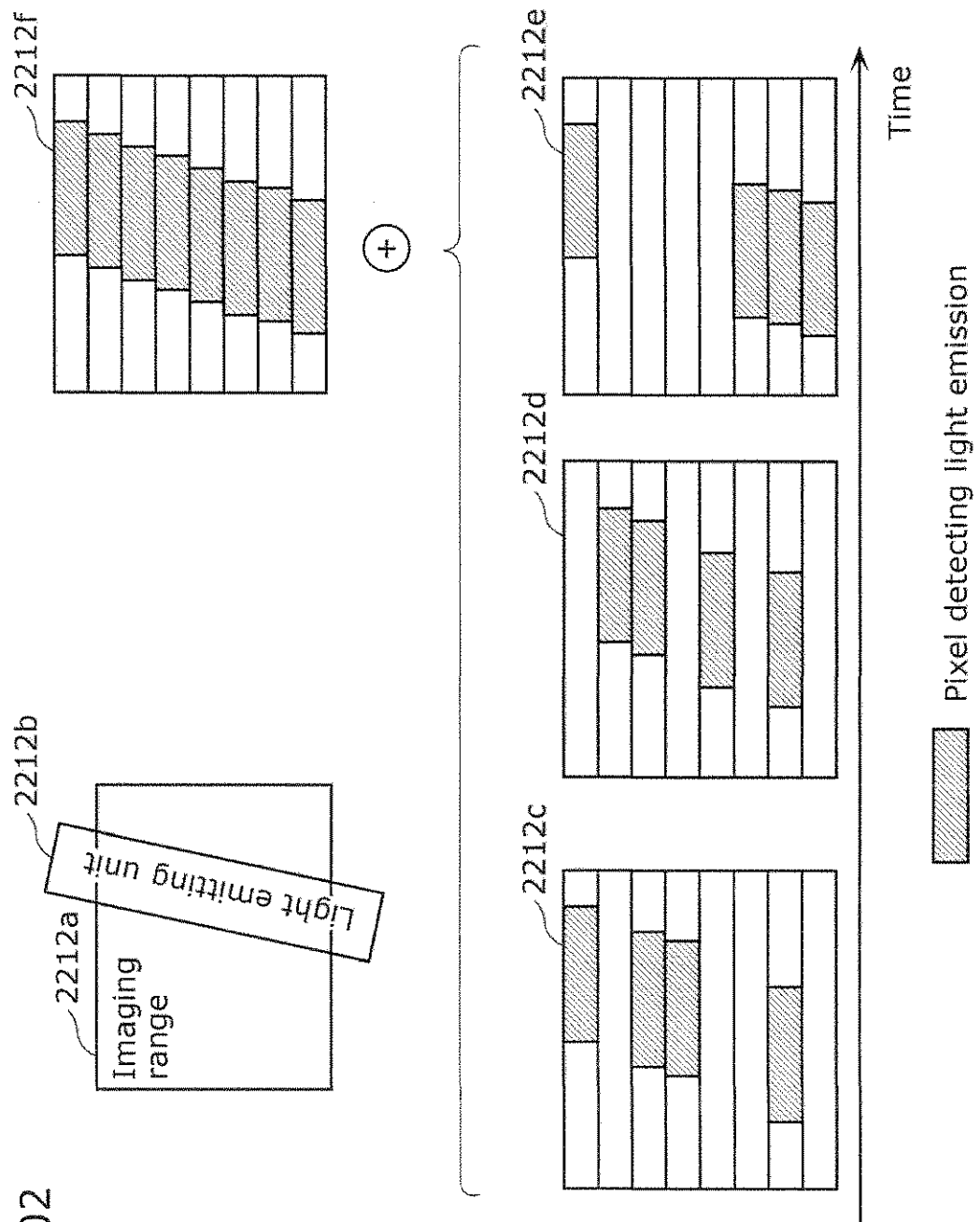


FIG. 104

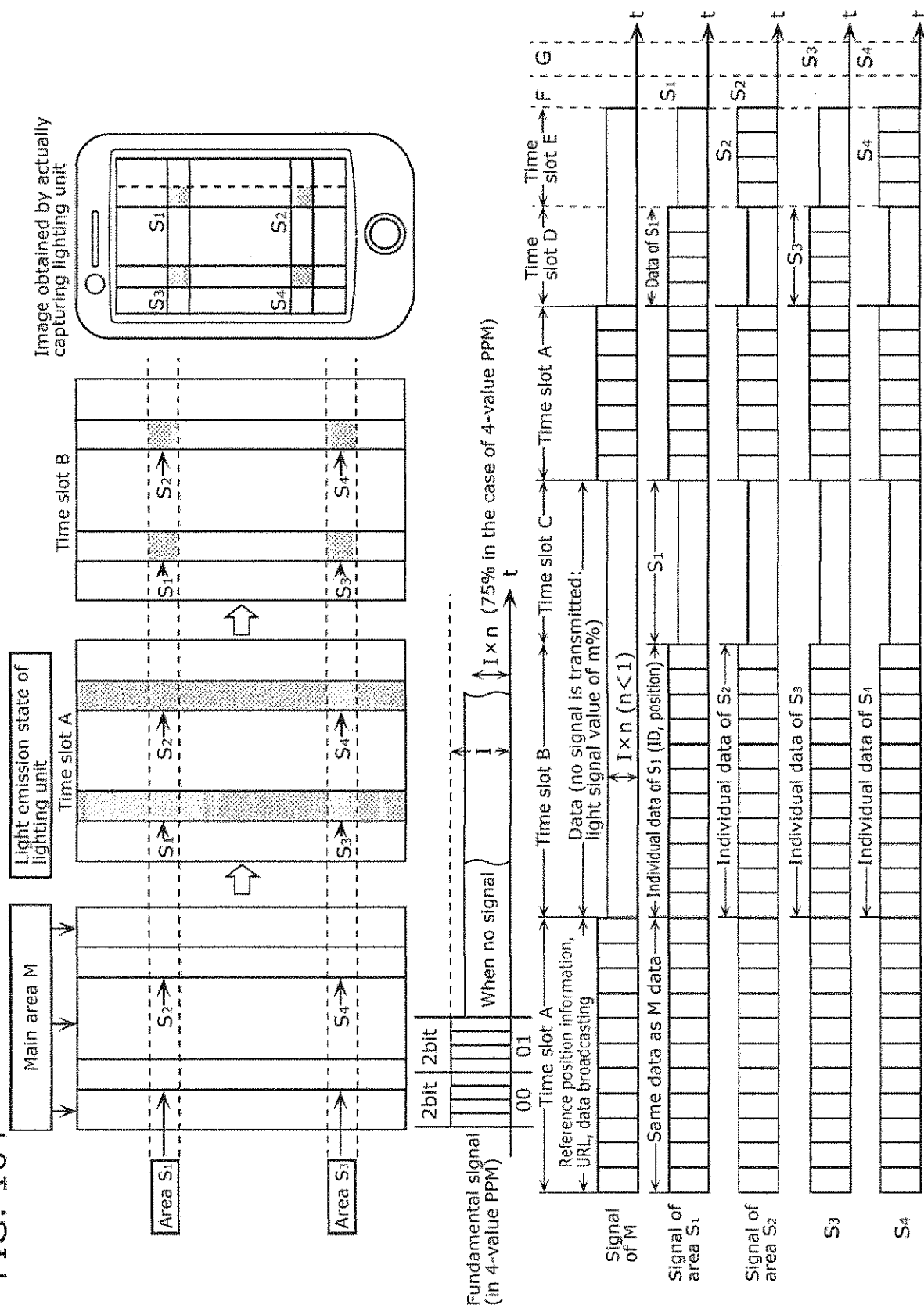


FIG. 105

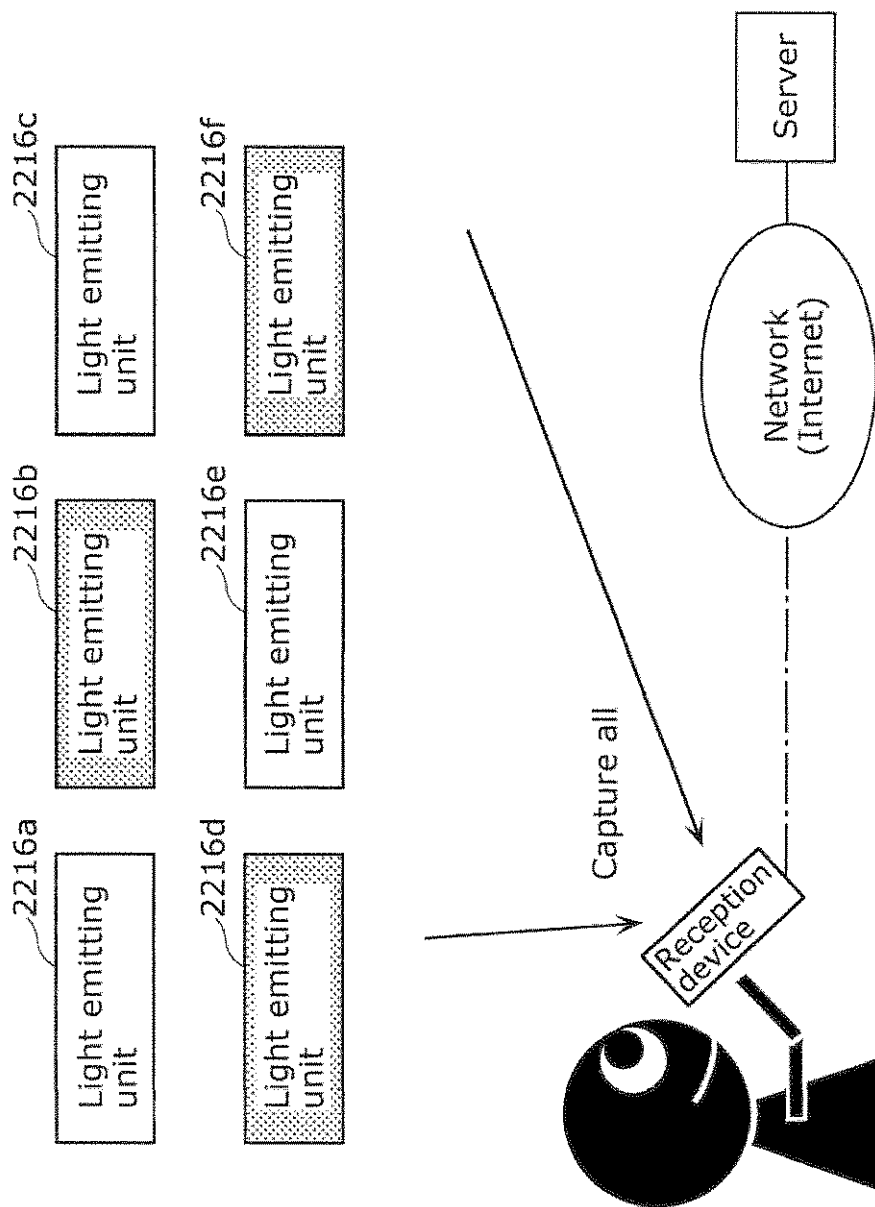
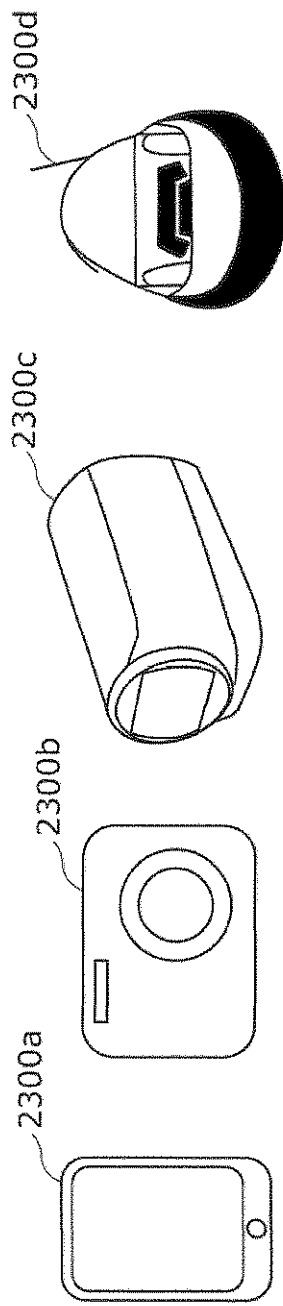
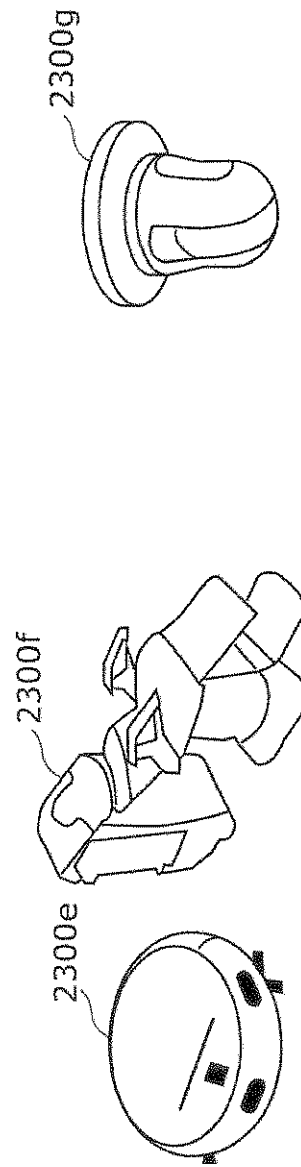


FIG. 106



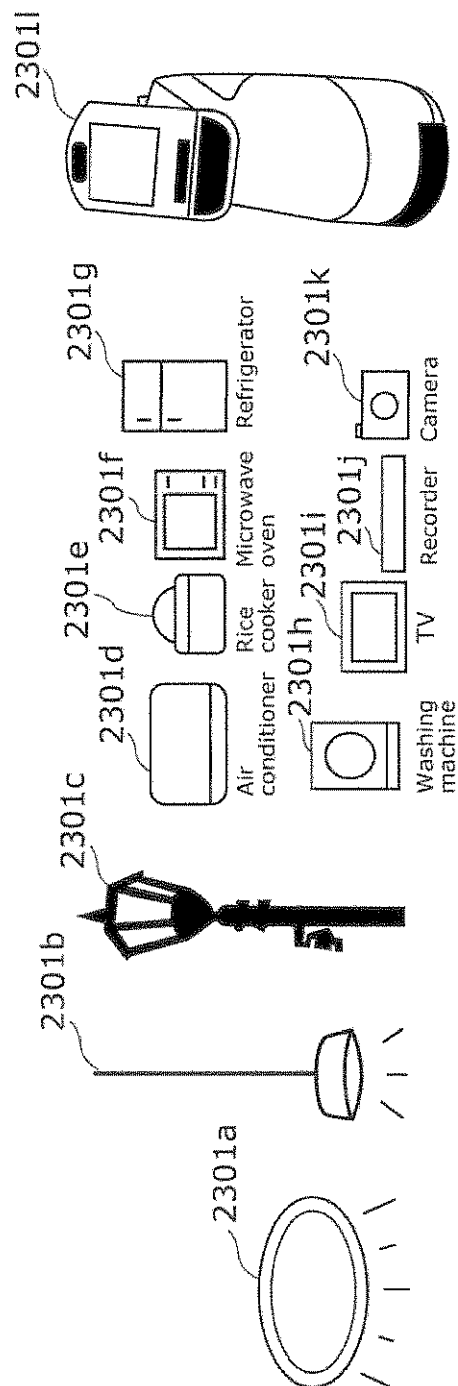
Mobile phone Digital still camera Digital video camera Head-mounted display



Robot (cleaning, nursing care, industrial, etc.) Surveillance camera

Example of reception device

FIG. 107



Example of transmission device

FIG. 108

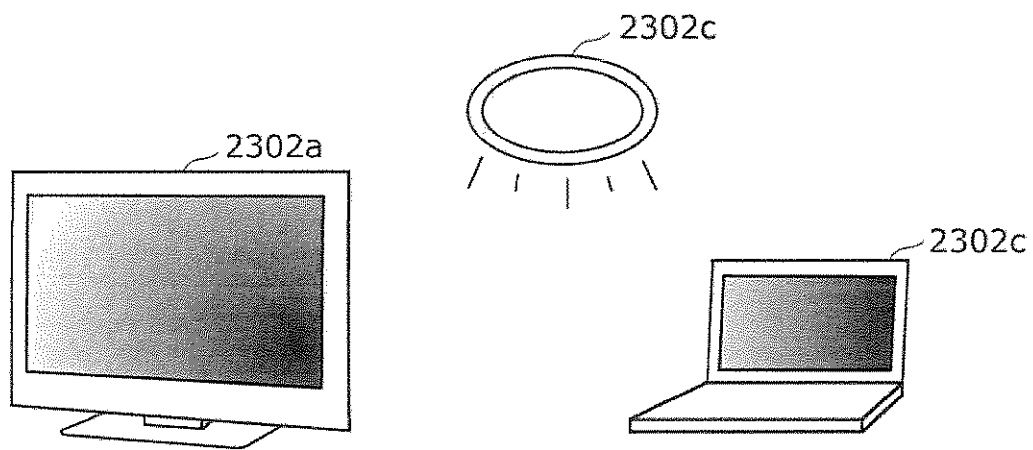


FIG. 109

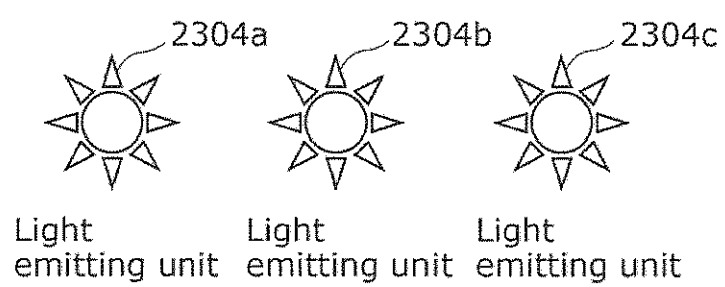


FIG. 110

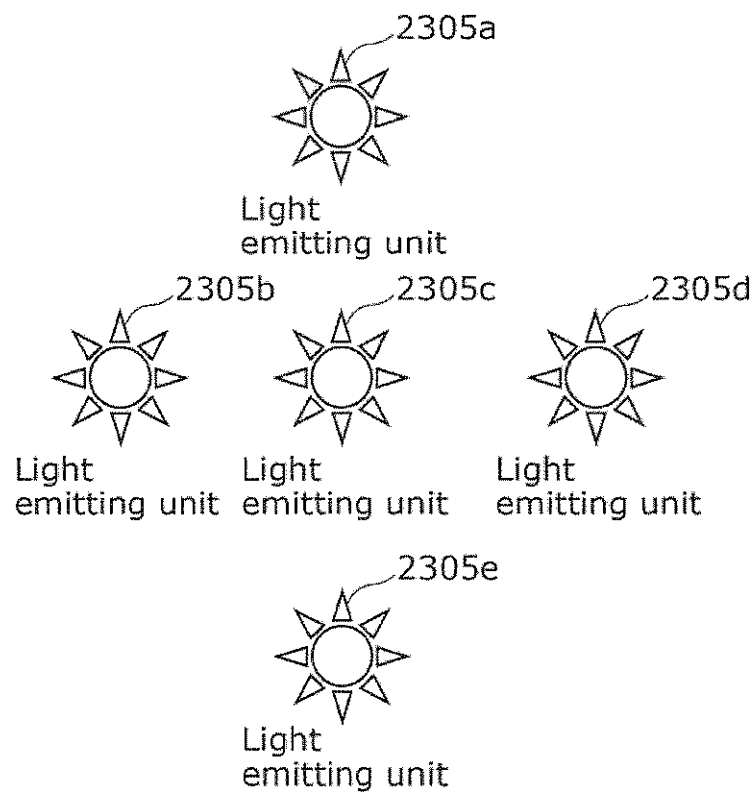


FIG. 111

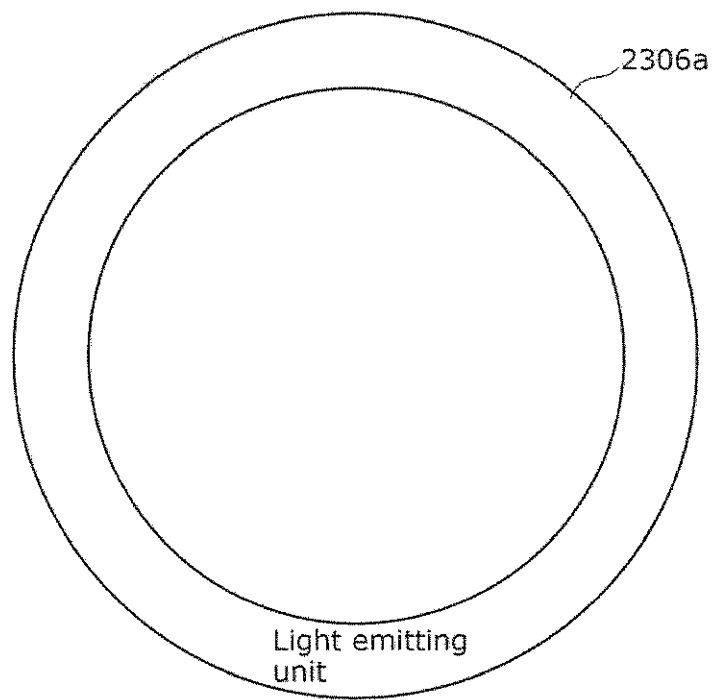


FIG. 112

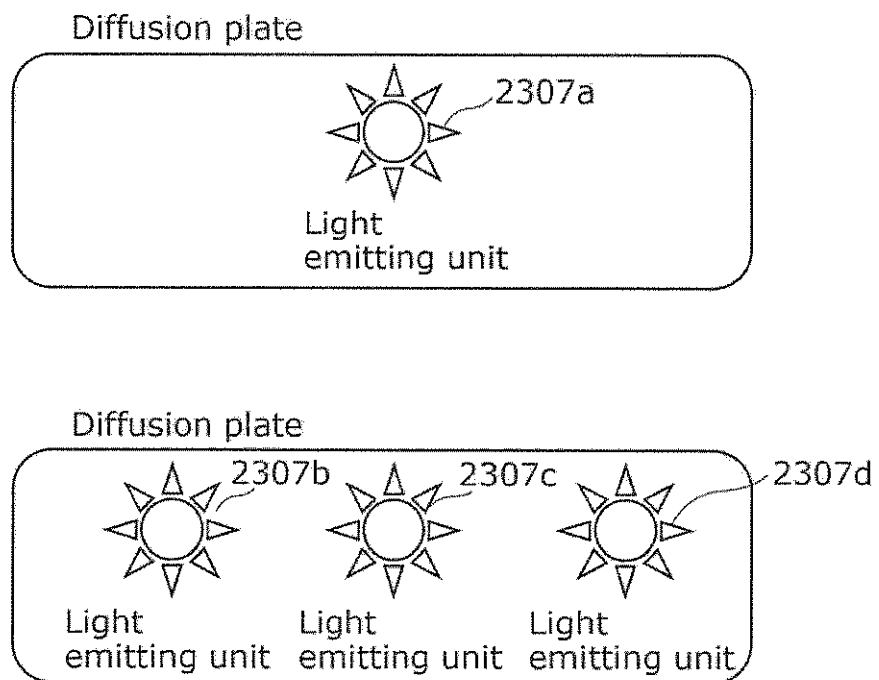


FIG. 113

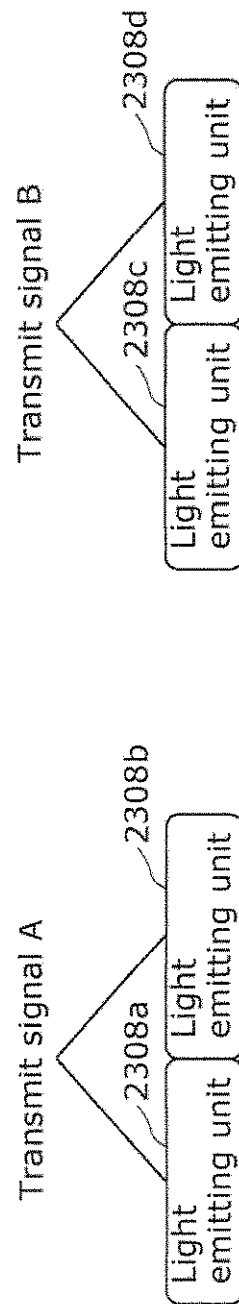


FIG. 114

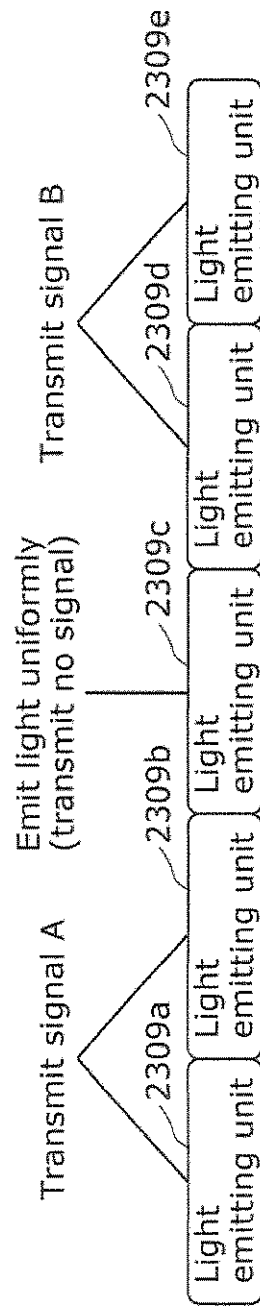


FIG. 115

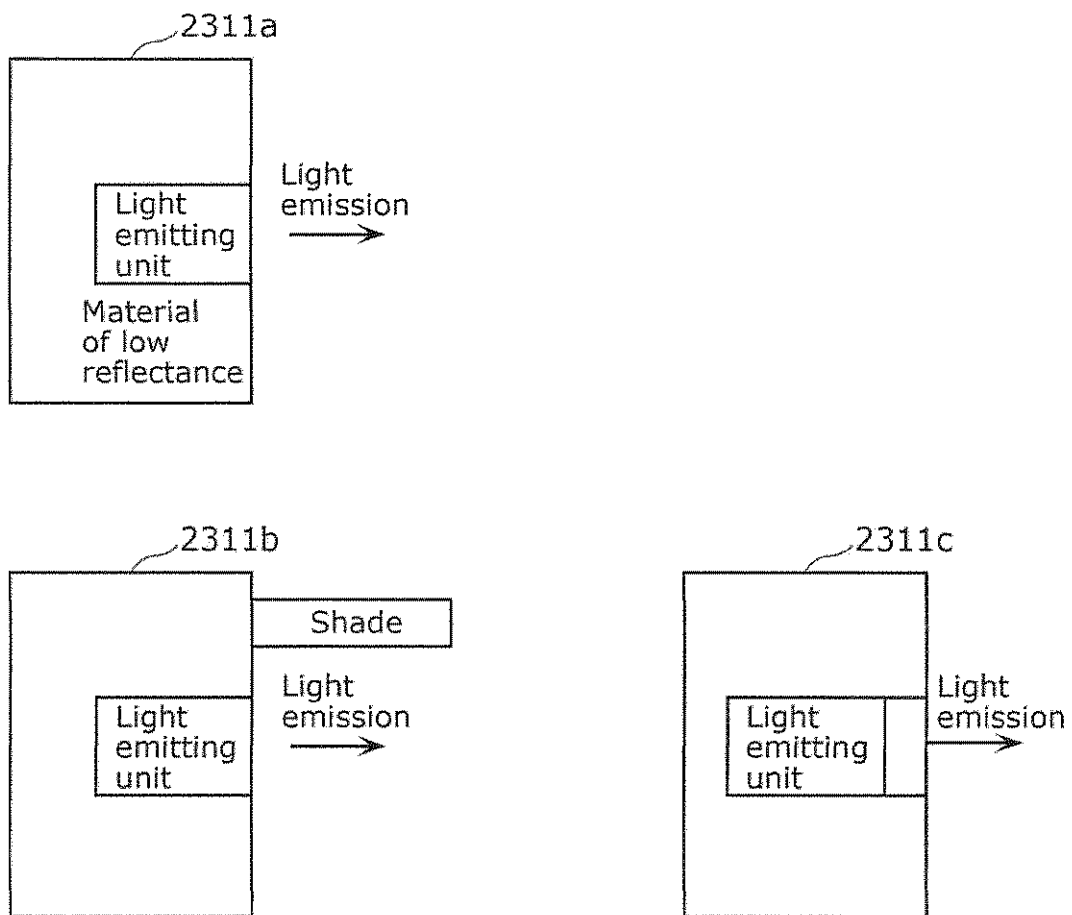


FIG. 116

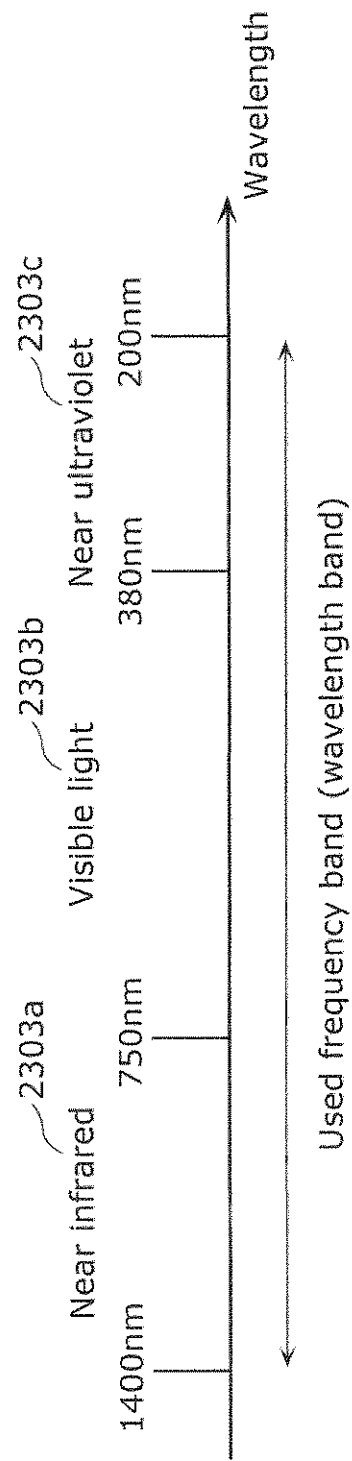


FIG. 117

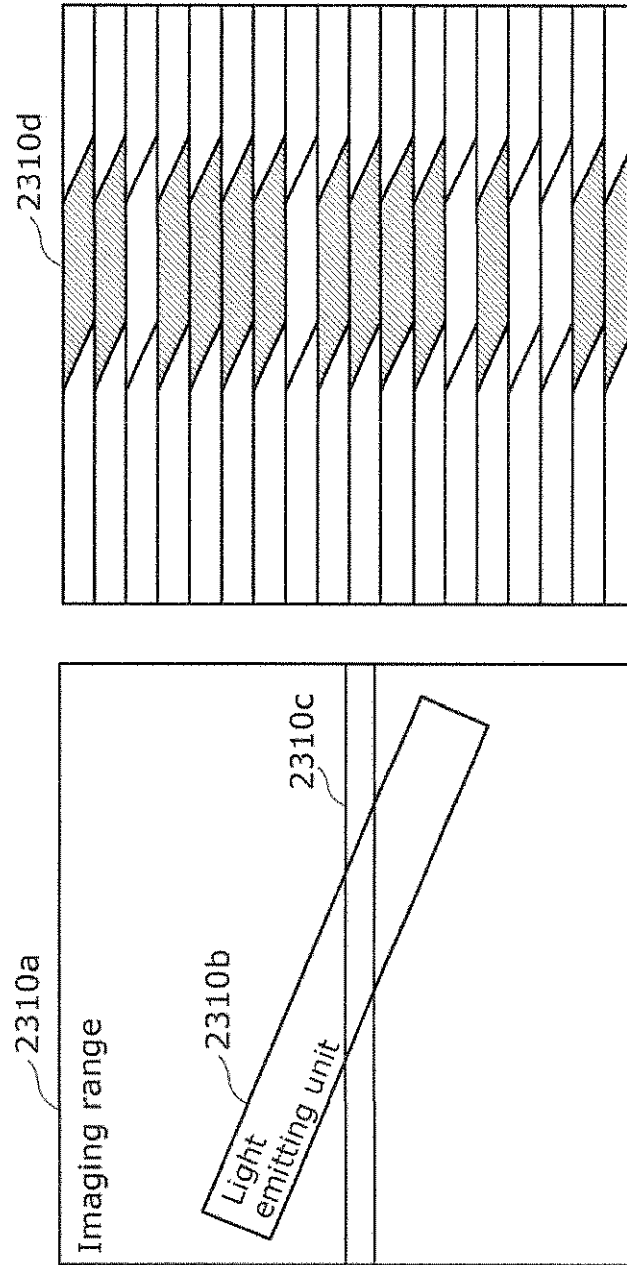


FIG. 118

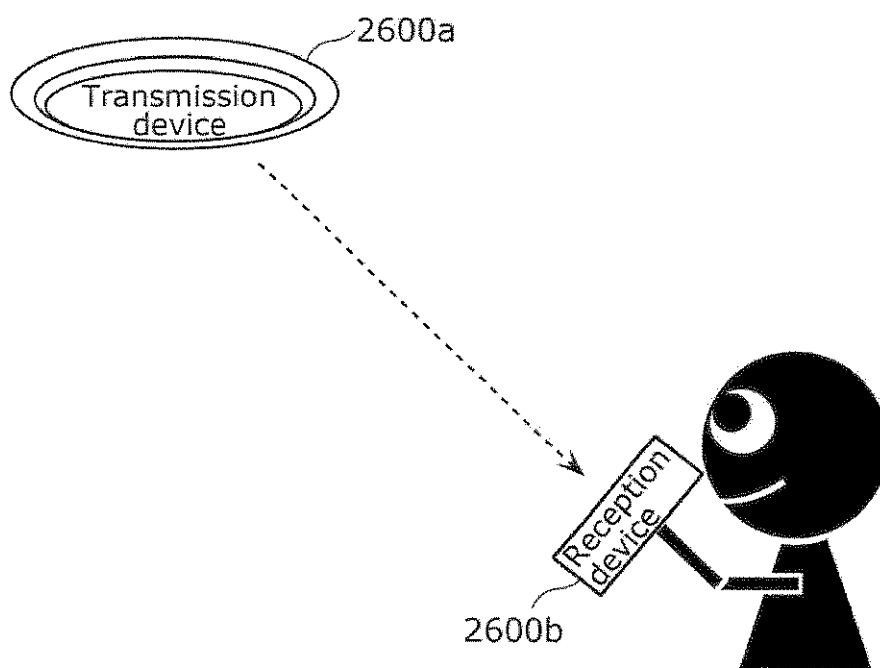


FIG. 119

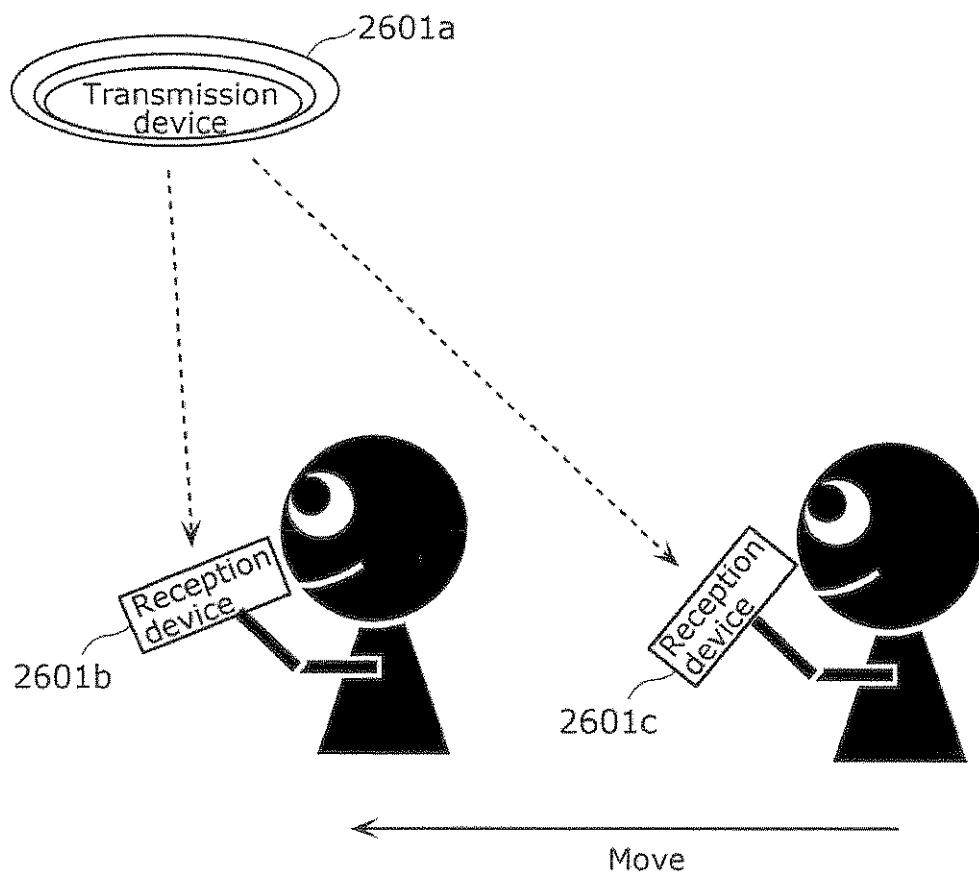


FIG. 120

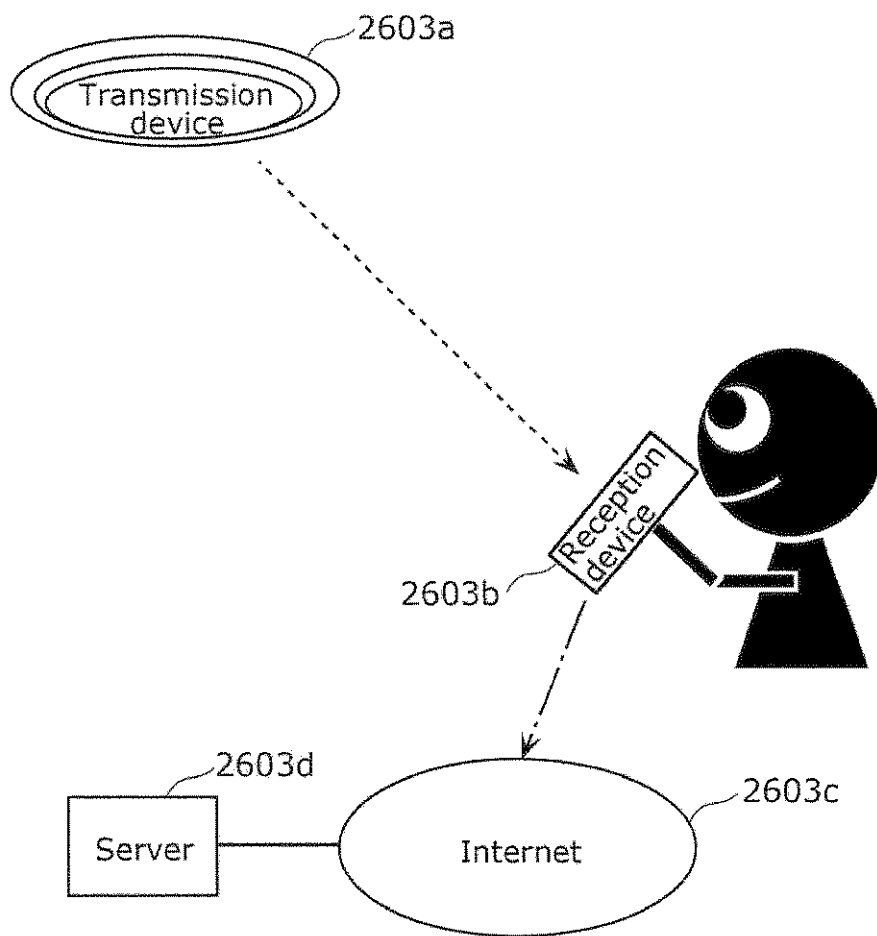


FIG. 121

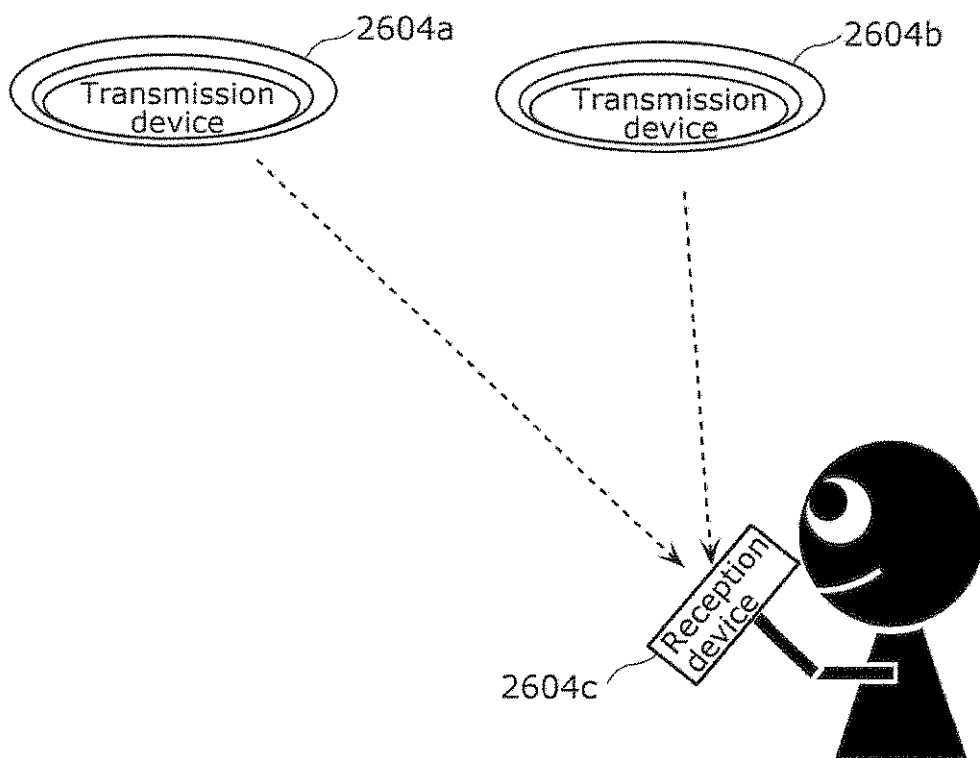


FIG. 122

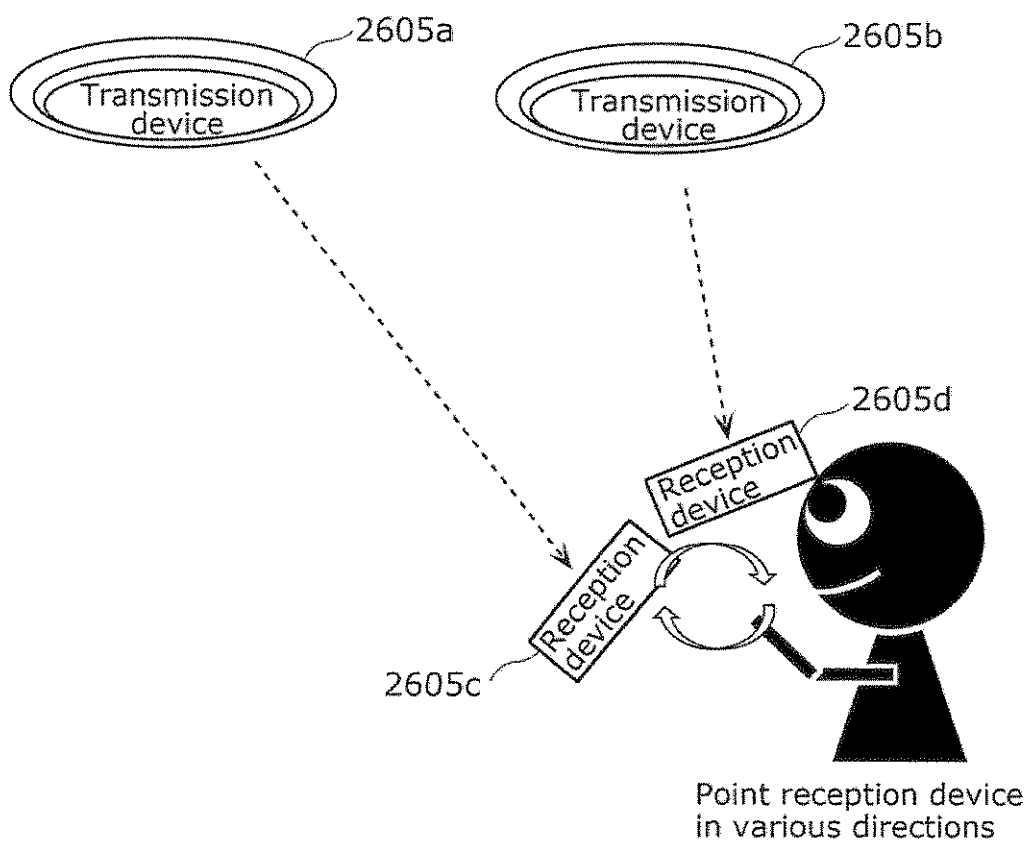


FIG. 123

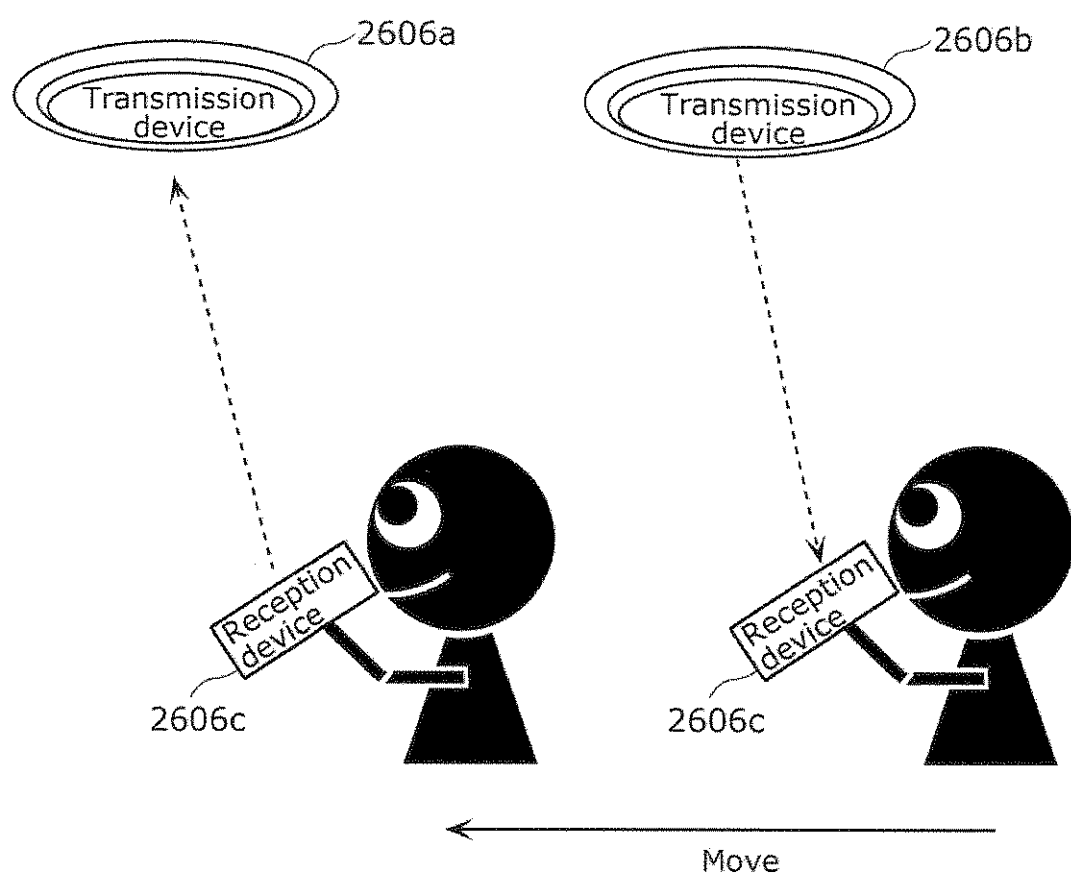


FIG. 124

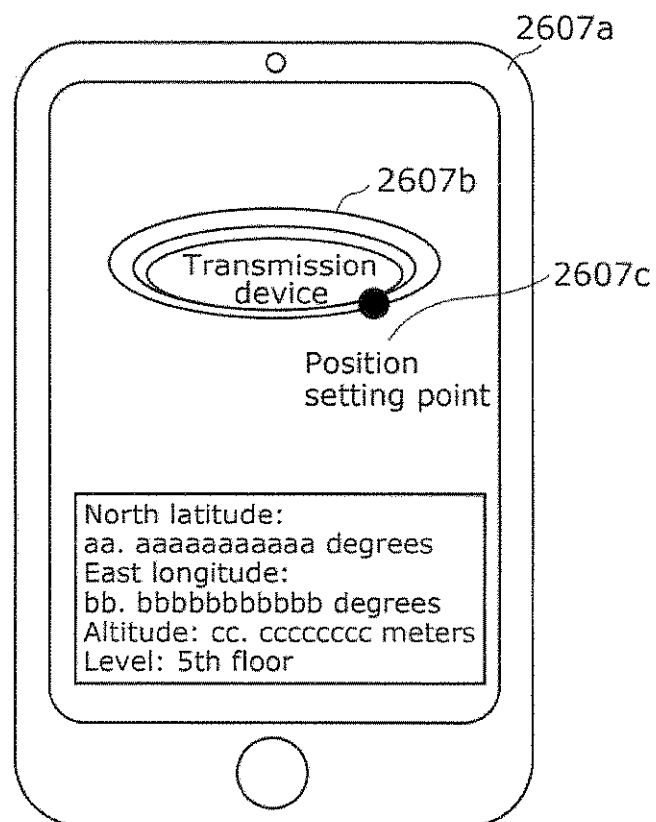


FIG. 125

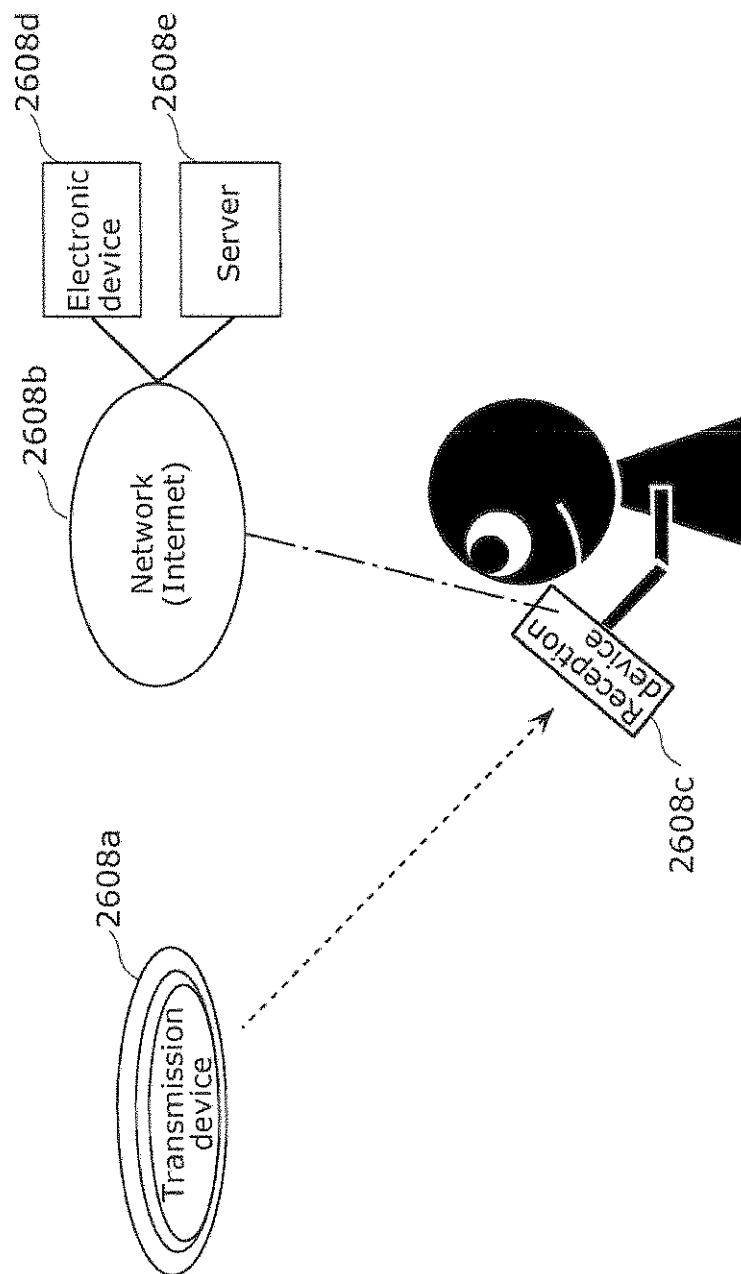


FIG. 126

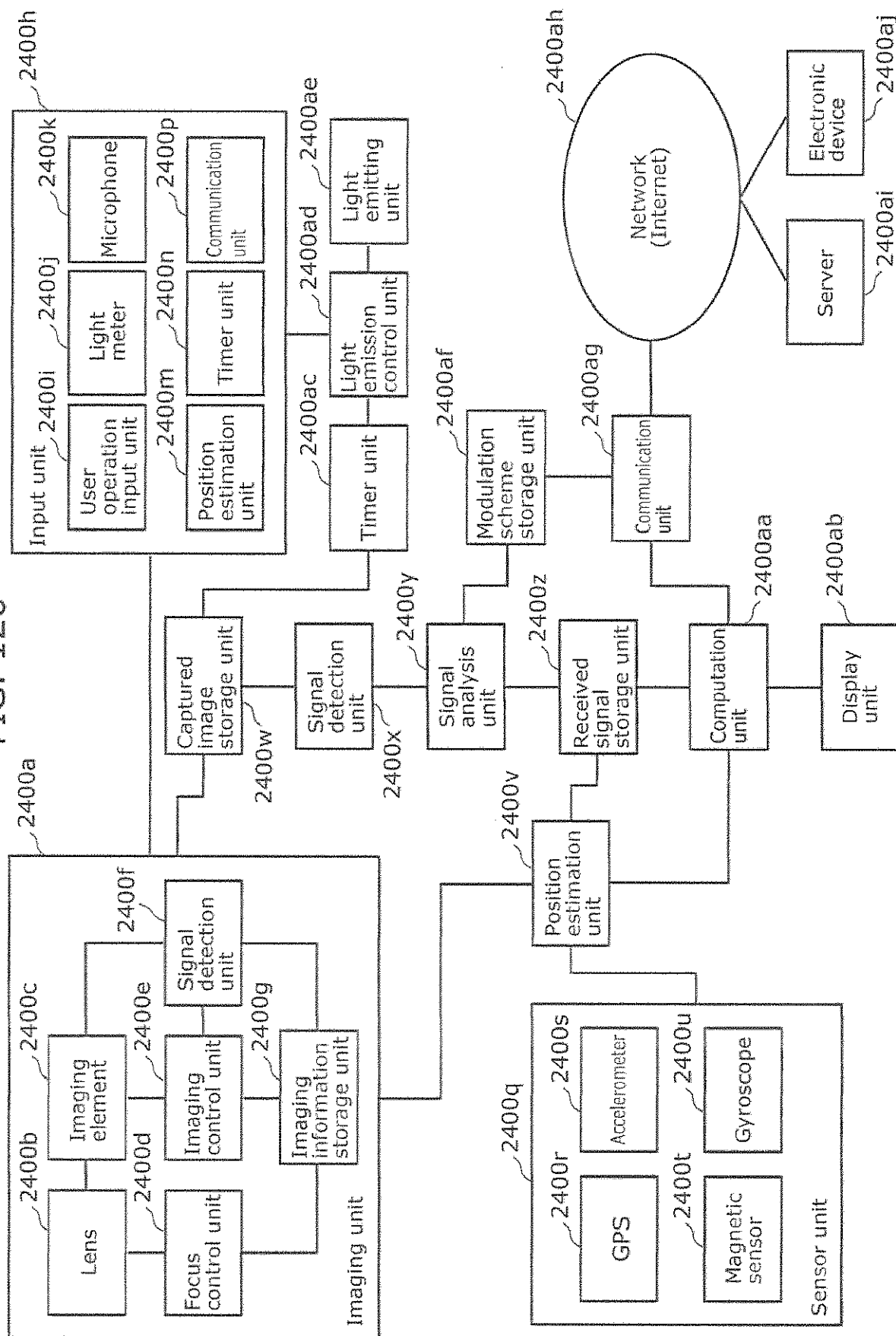


FIG. 127

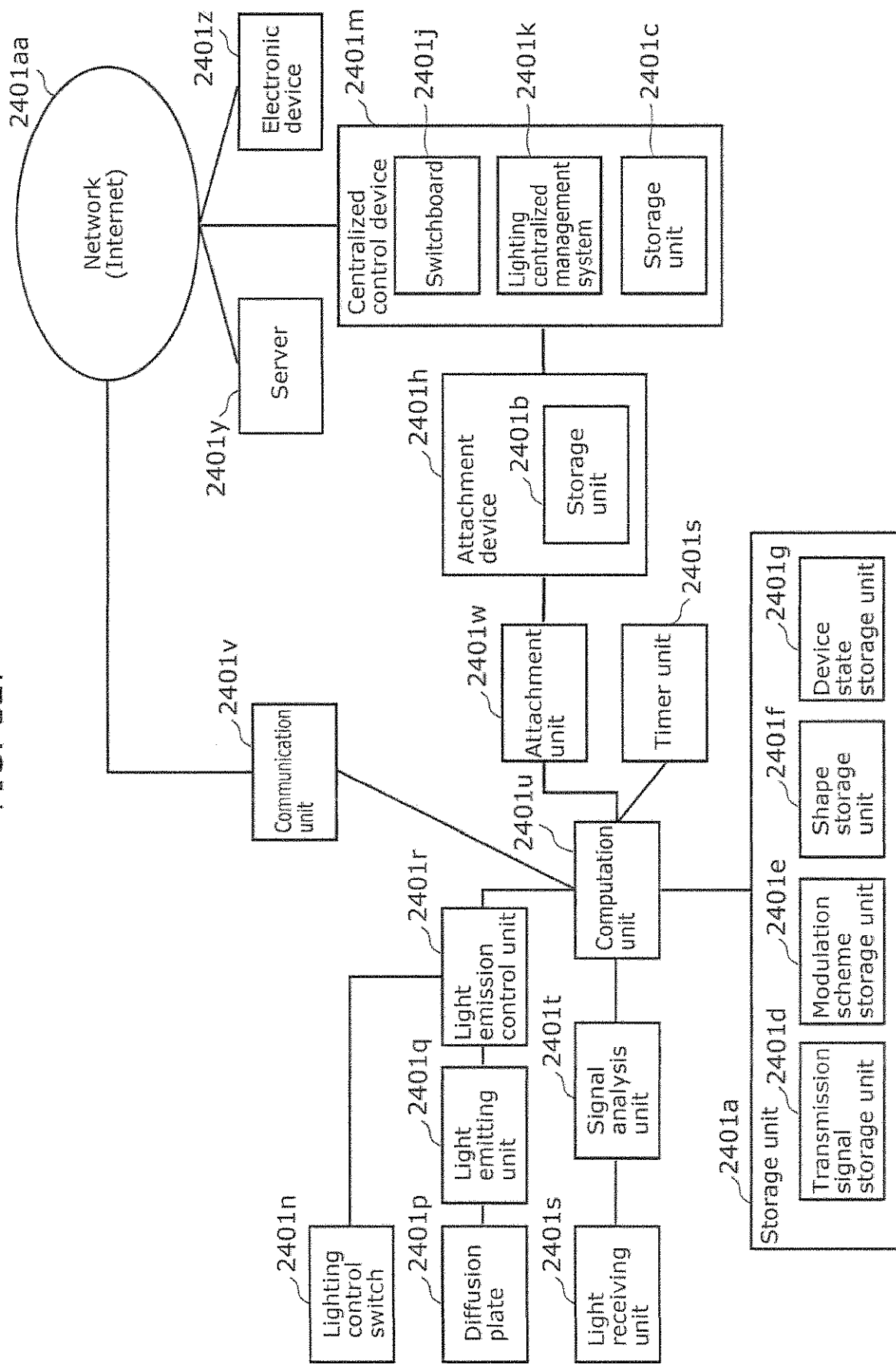


FIG. 128

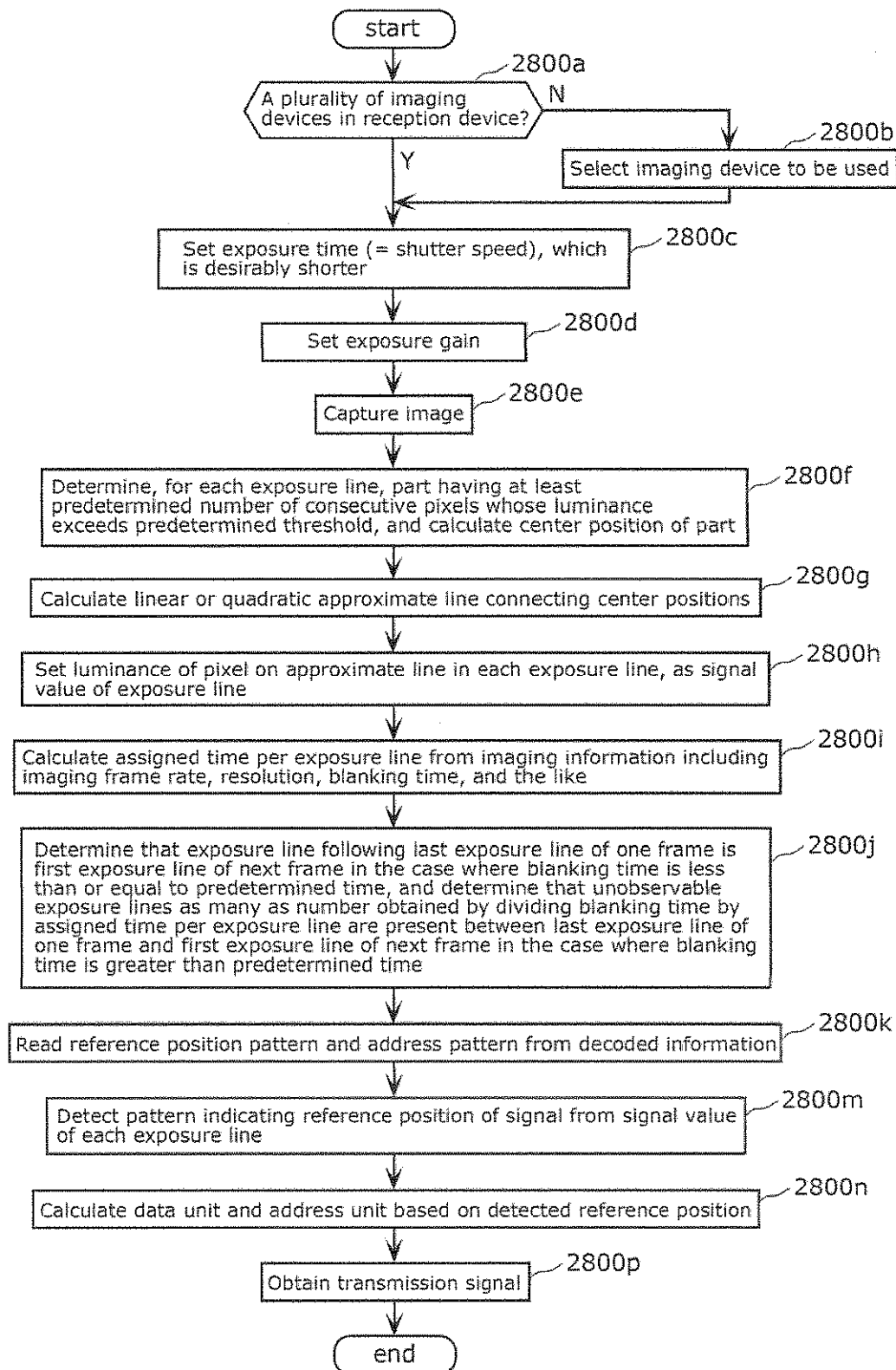


FIG. 129

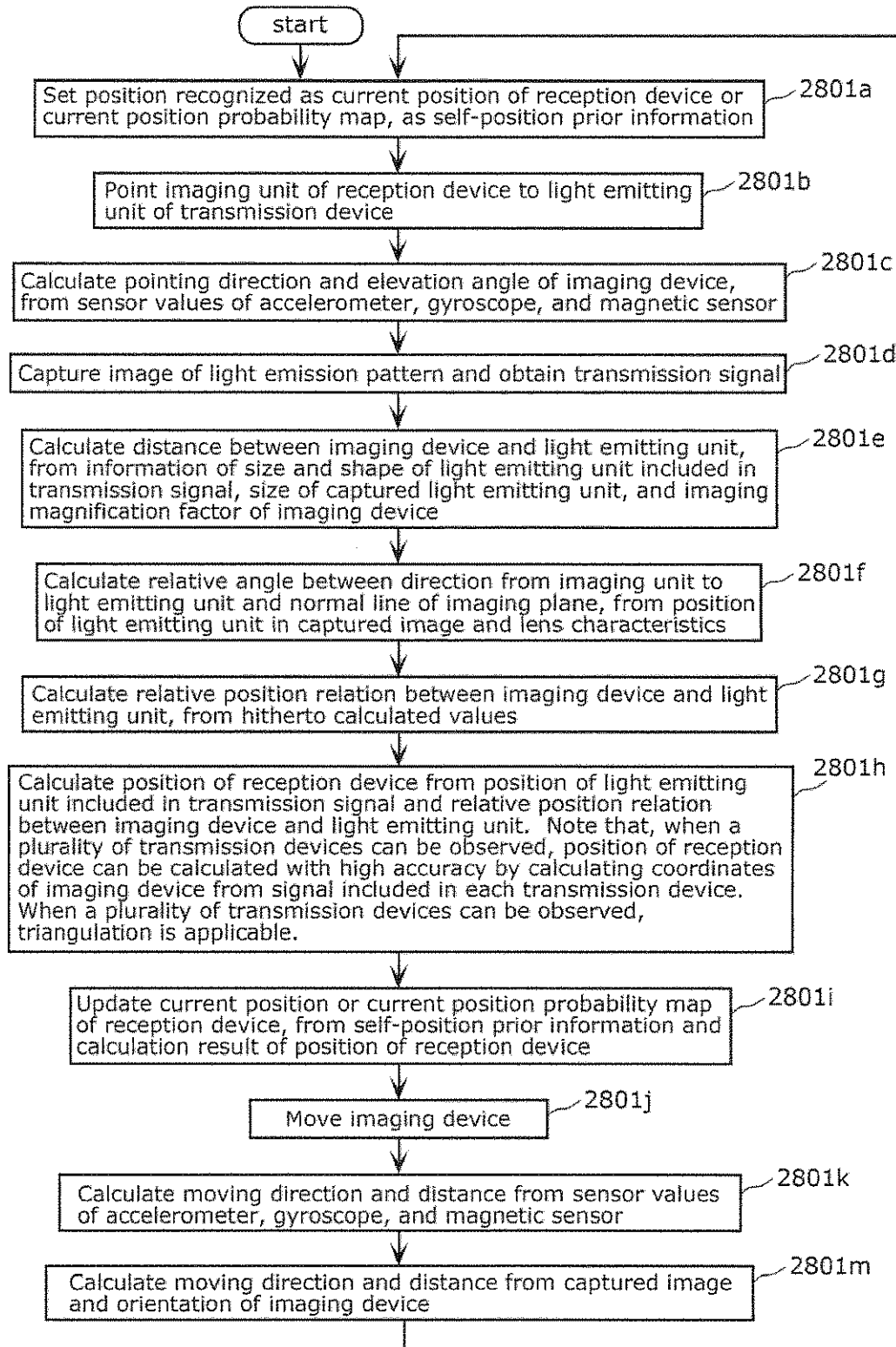


FIG. 130

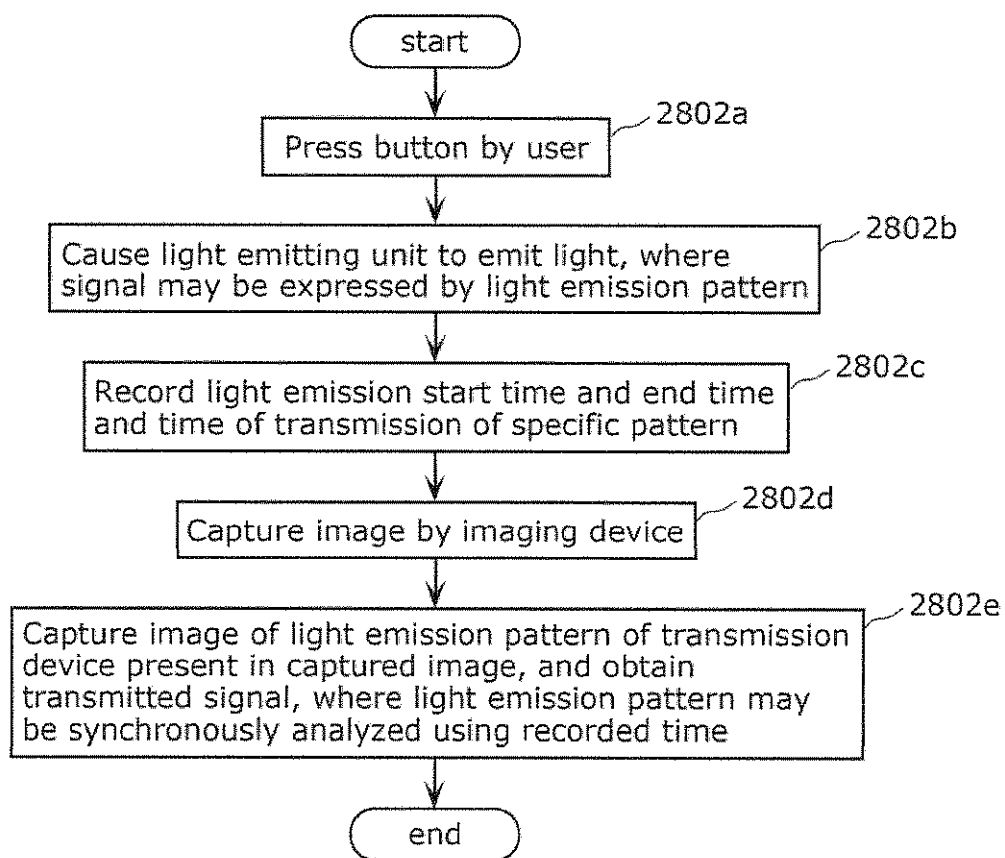


FIG. 131

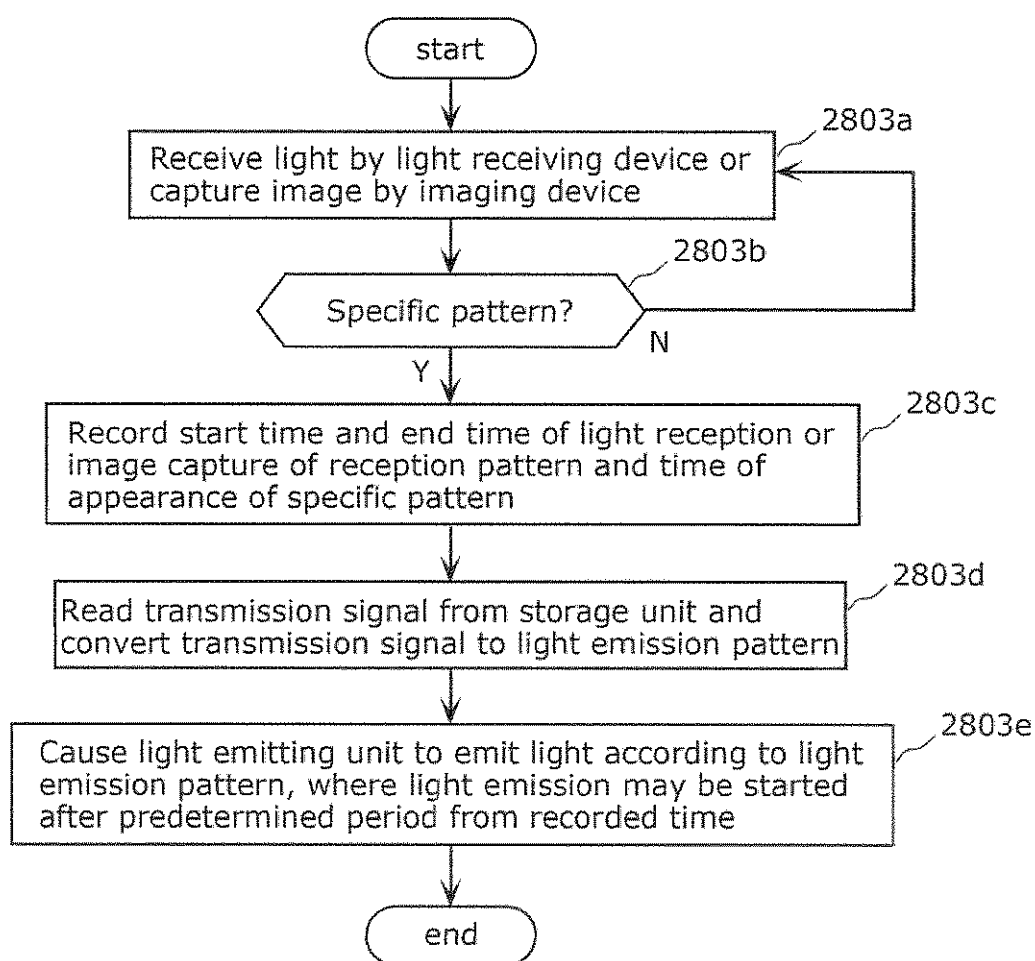
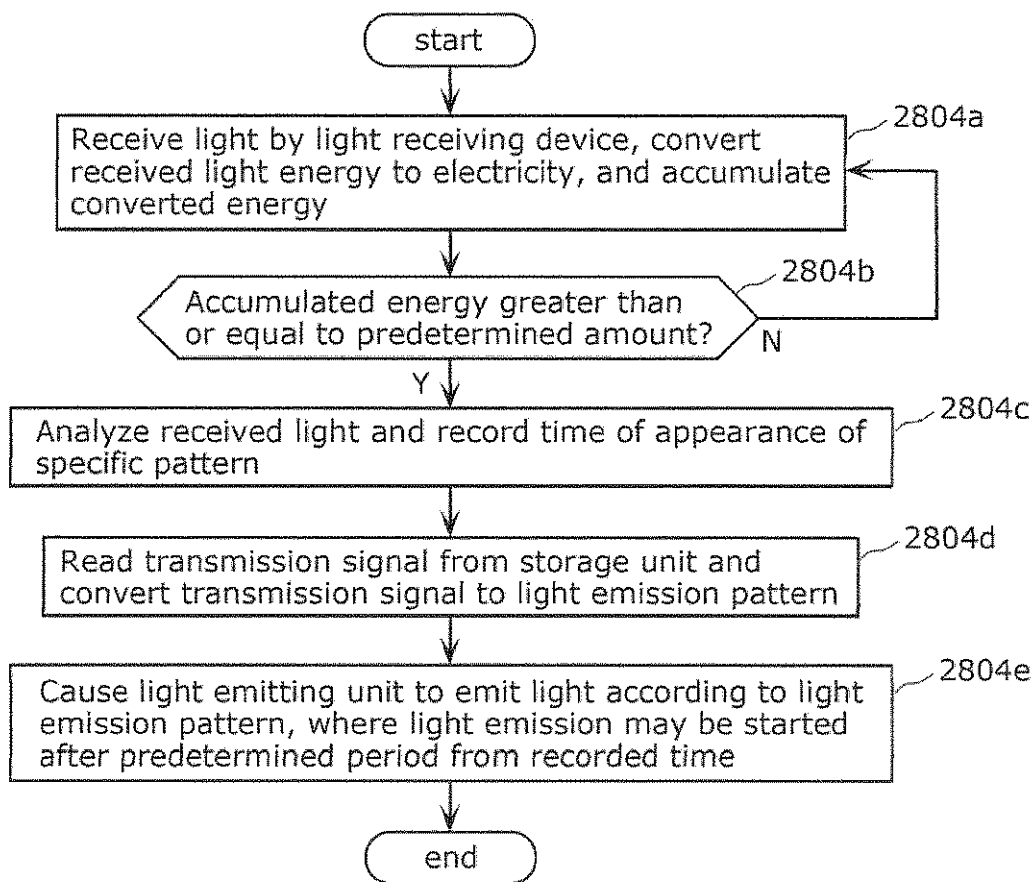


FIG. 132



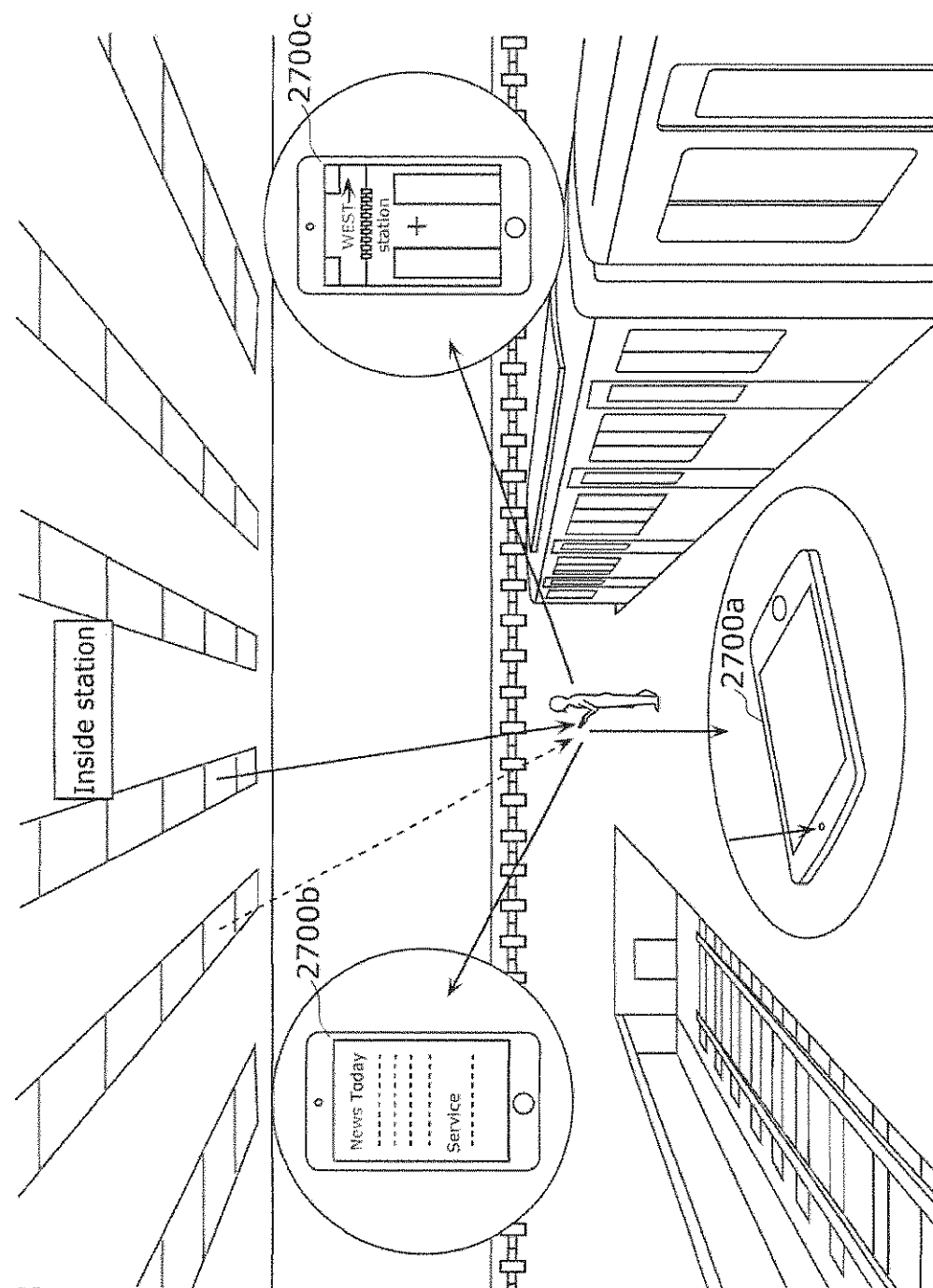


FIG. 133

FIG. 134

Inside vehicle

2704e

θ_1

2704a

Camera unit

168

2704c

2704b

2704d

No. 14

FIG. 135

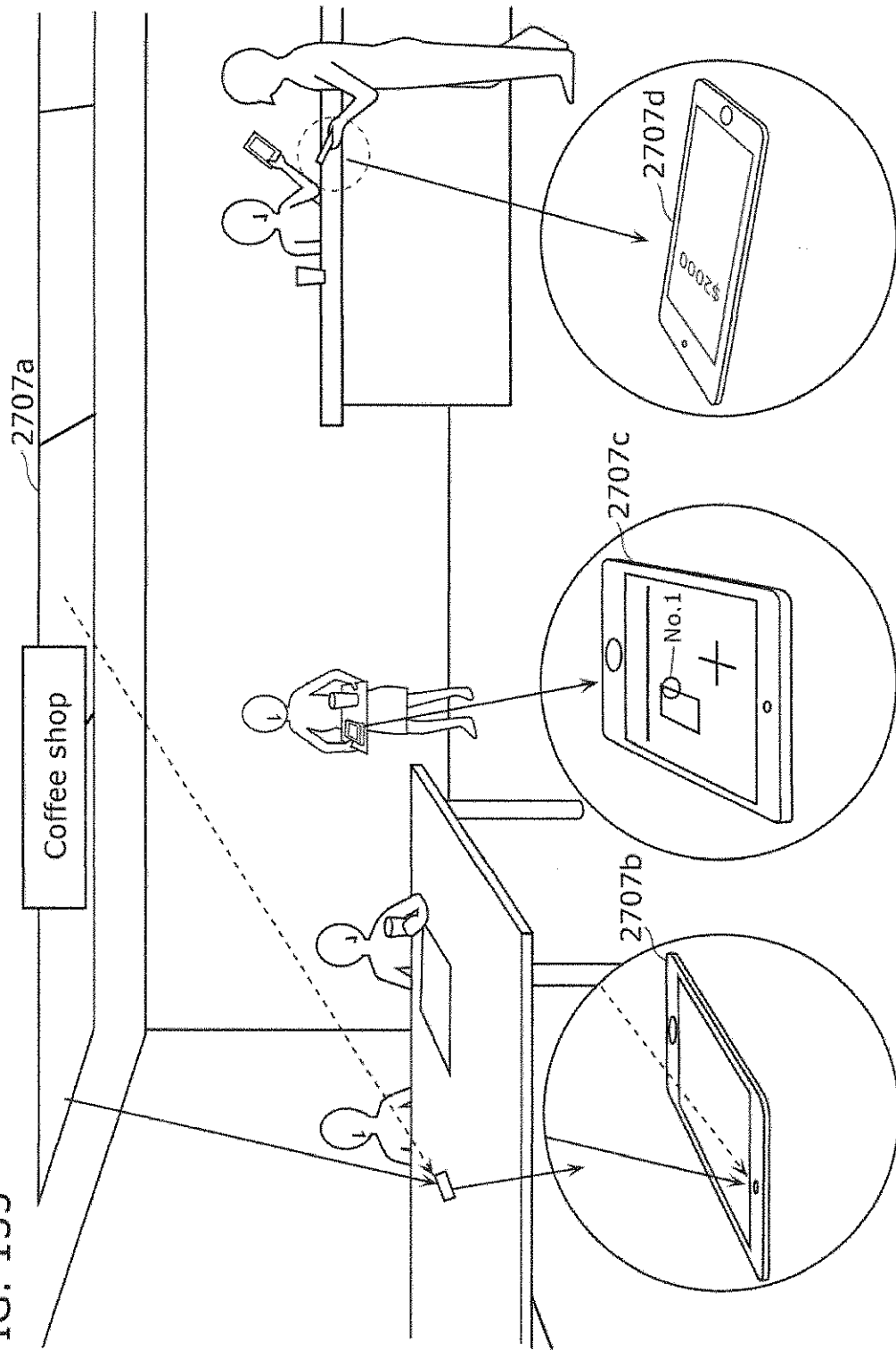


FIG. 136

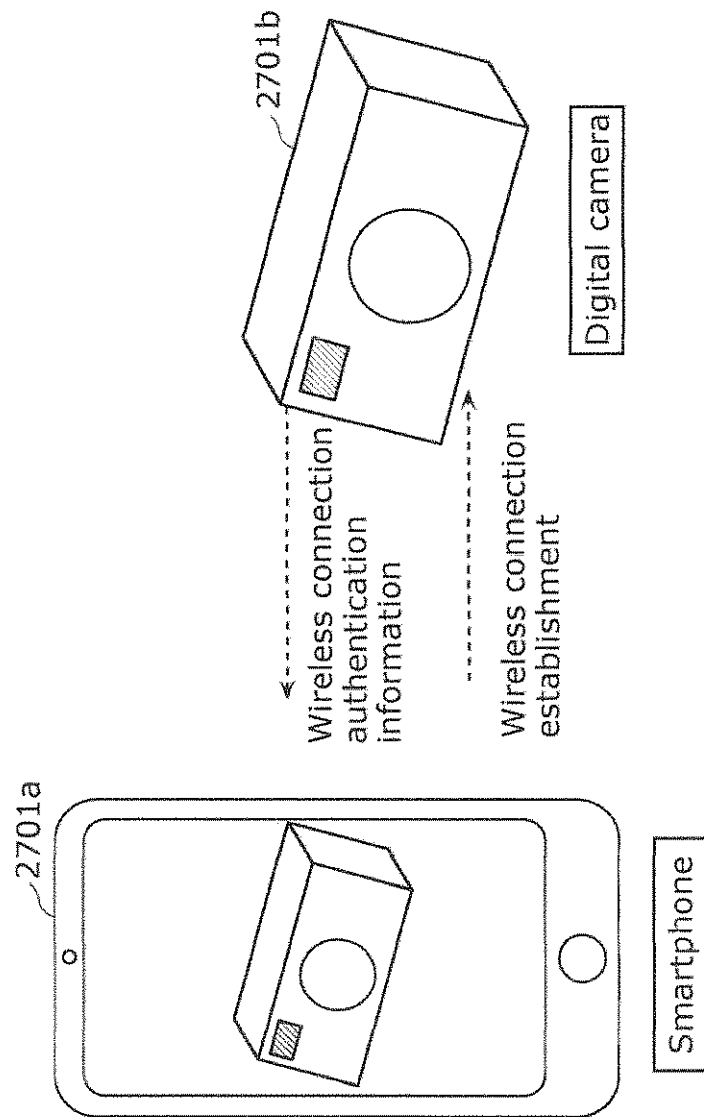


FIG. 137

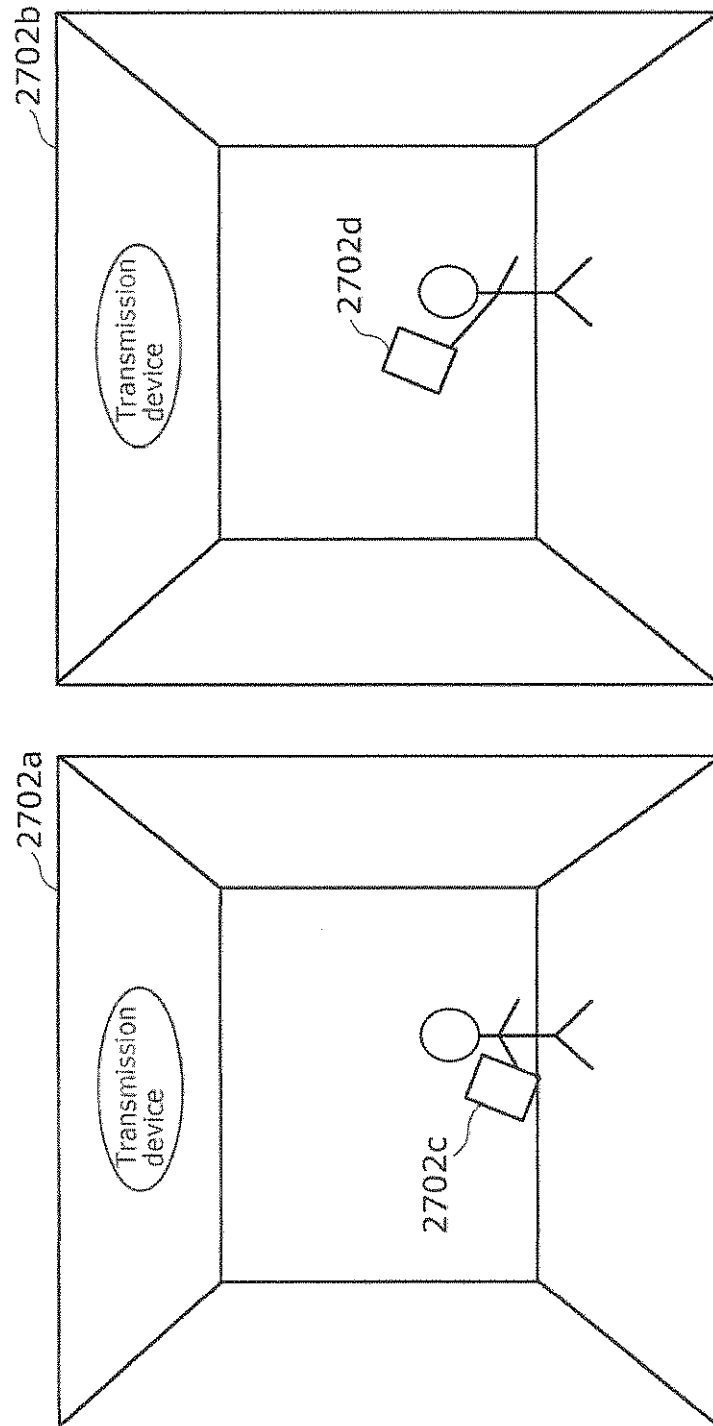
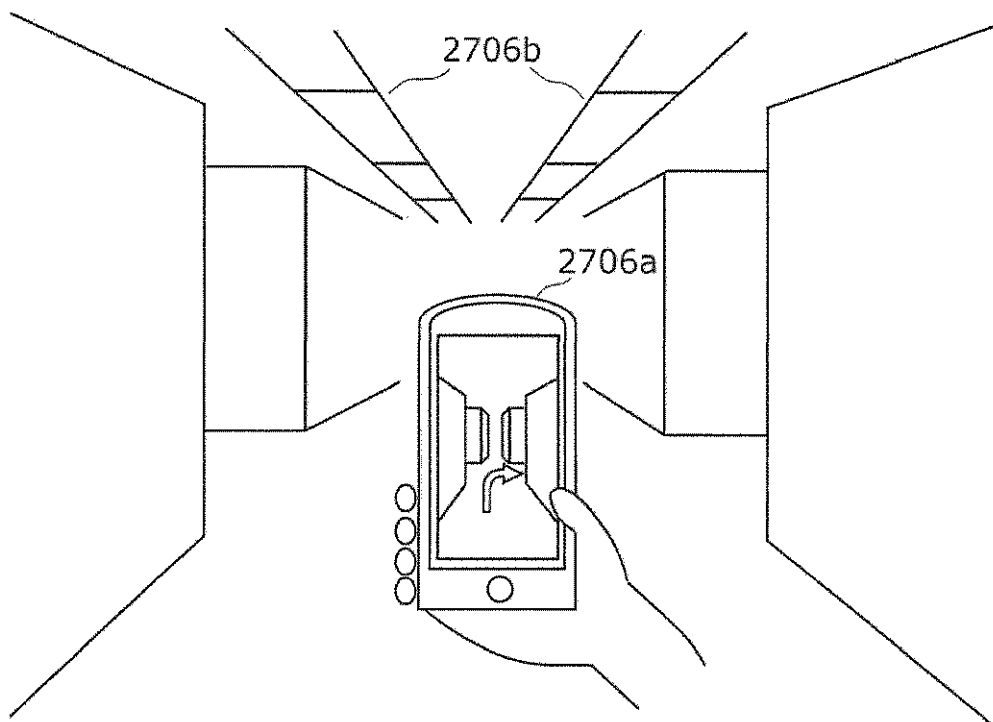


FIG. 138



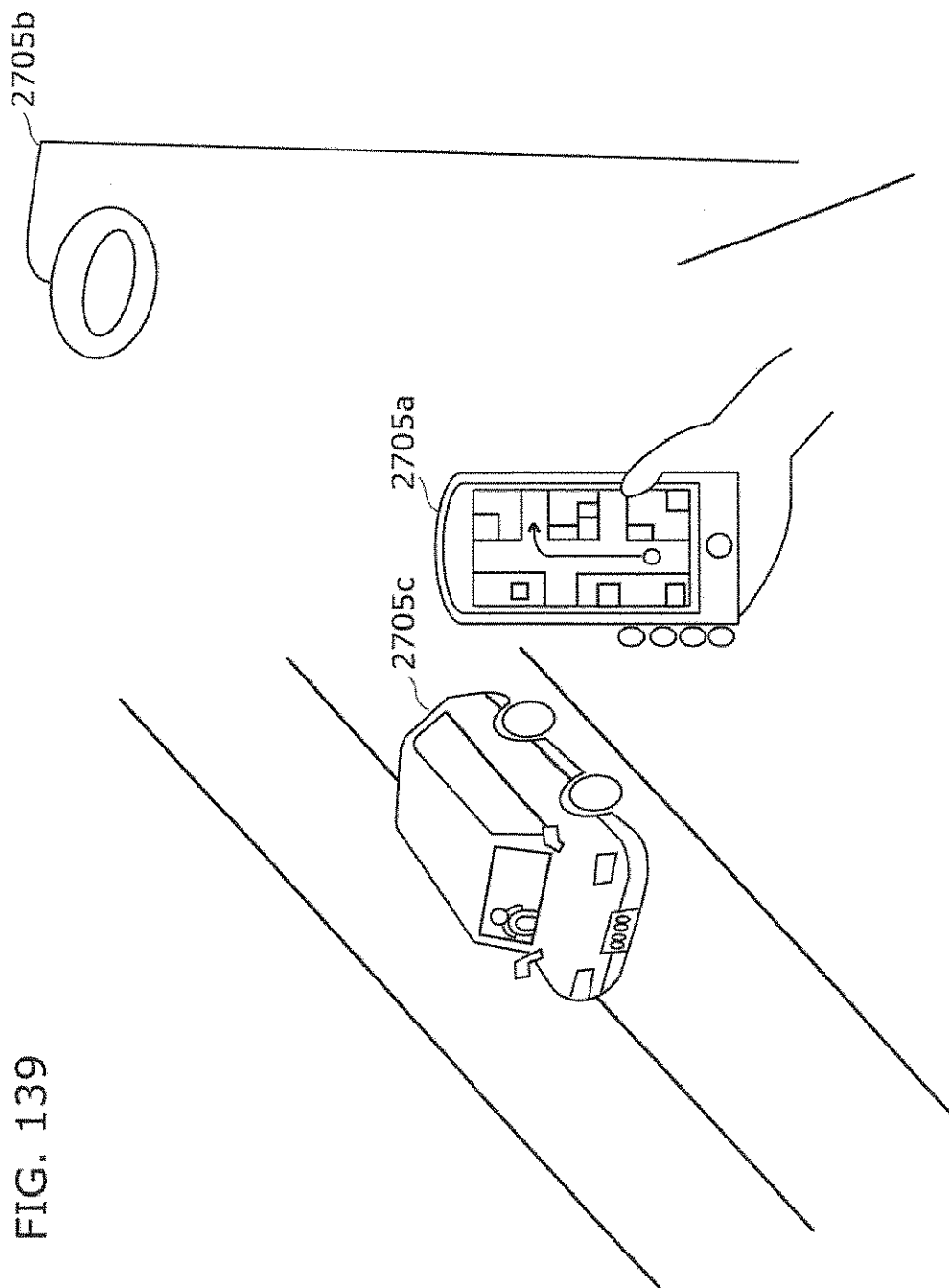


FIG. 139

FIG. 140

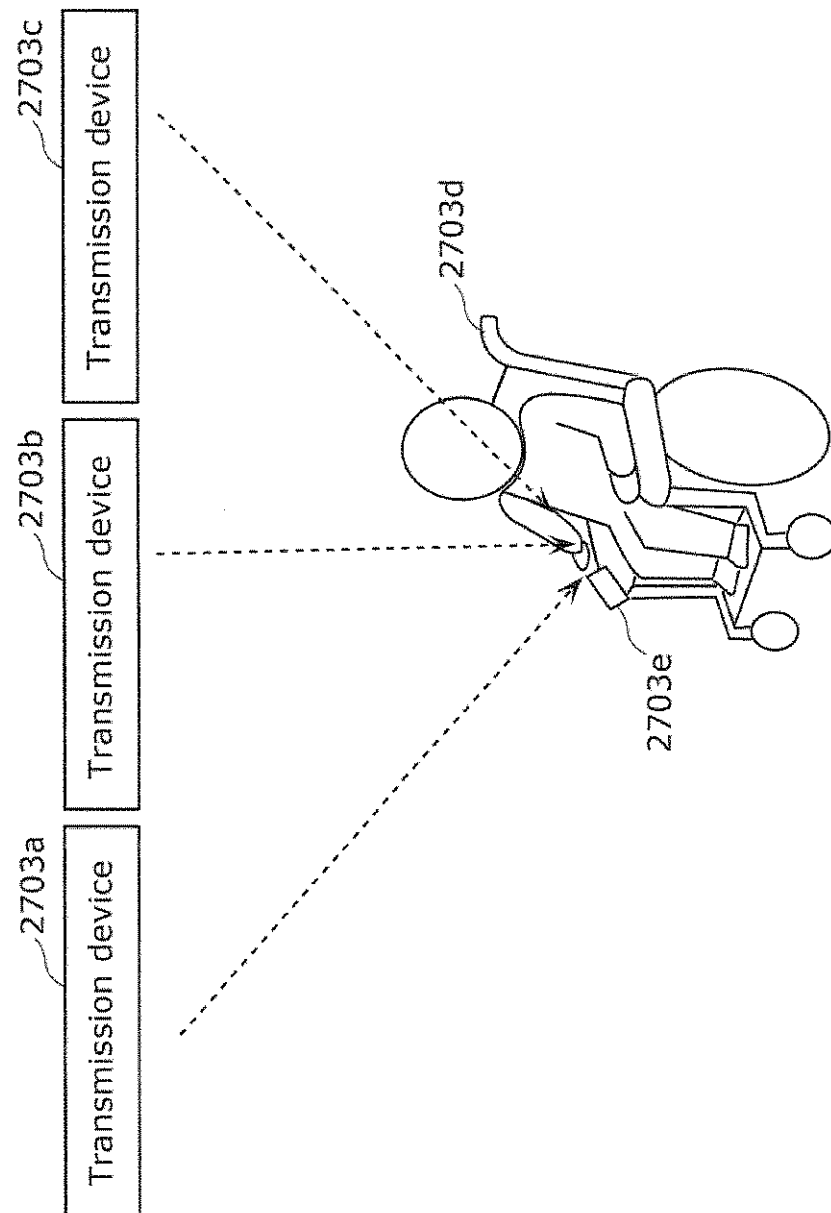


FIG. 141

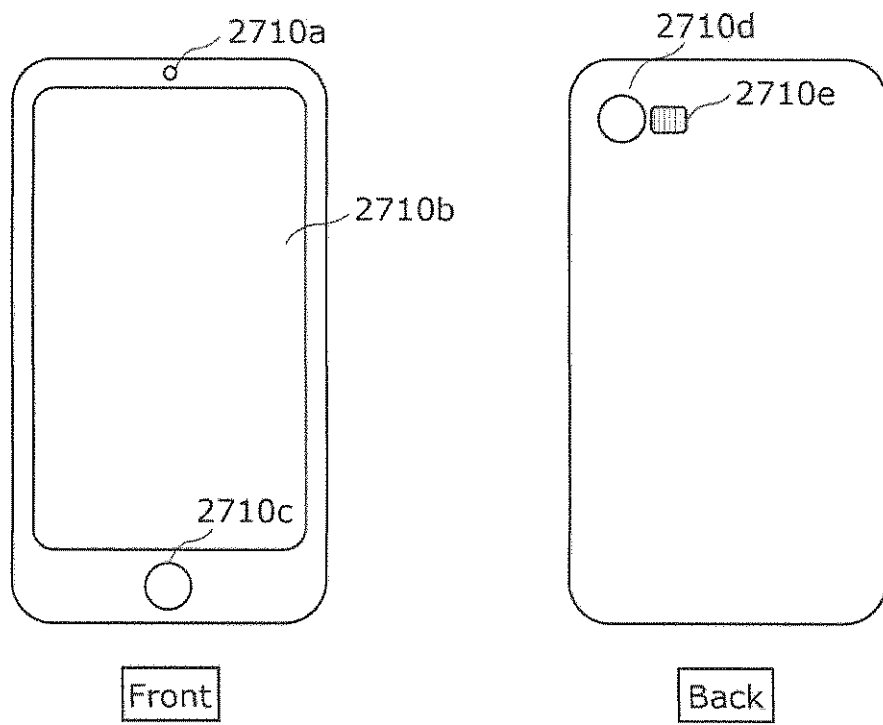


FIG. 142

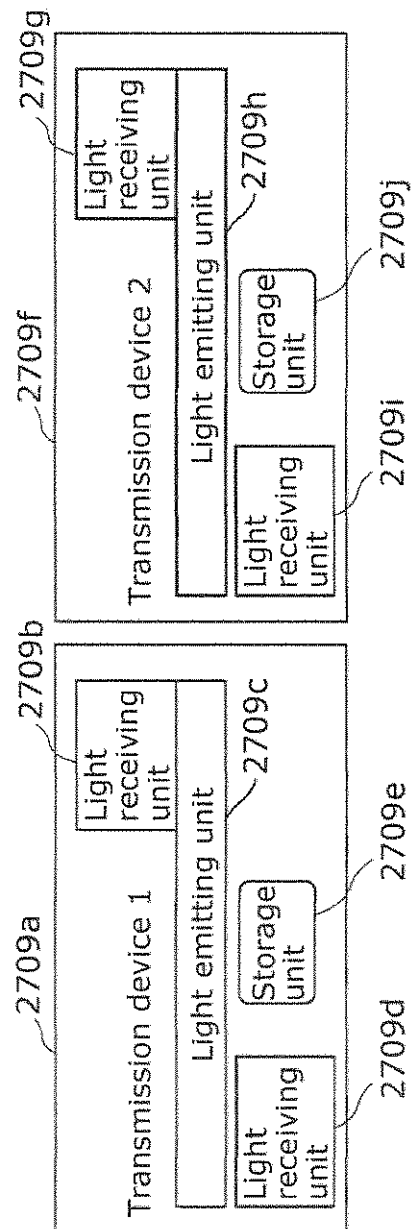


FIG. 143

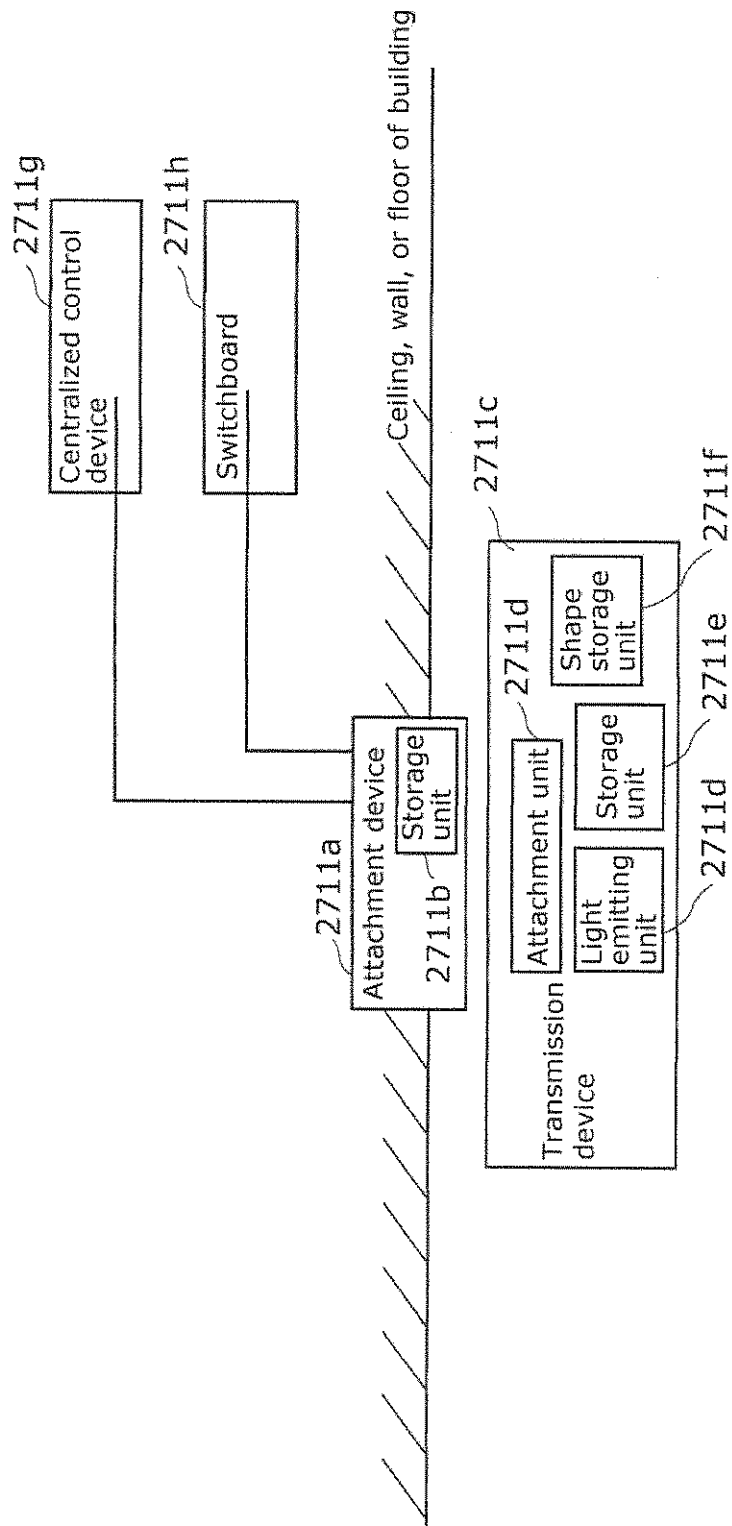


FIG. 144

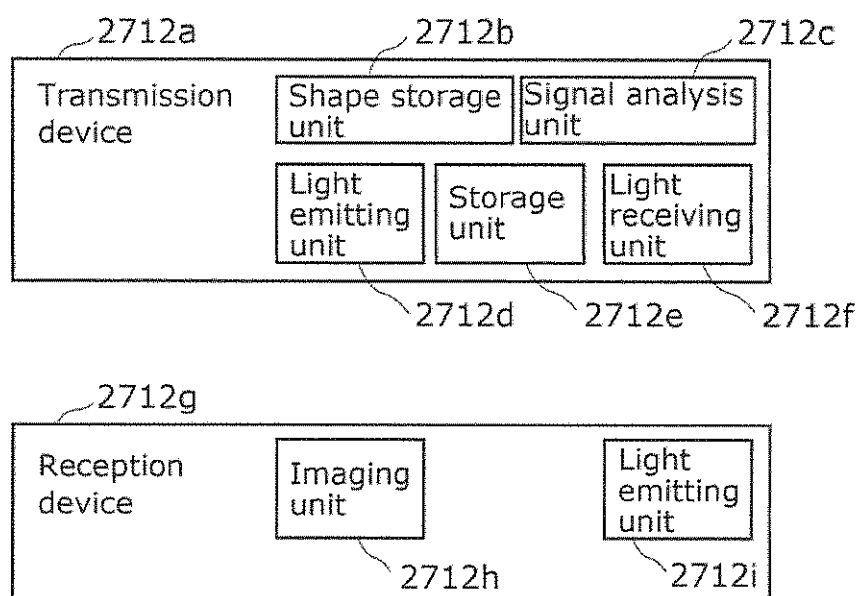


FIG. 145

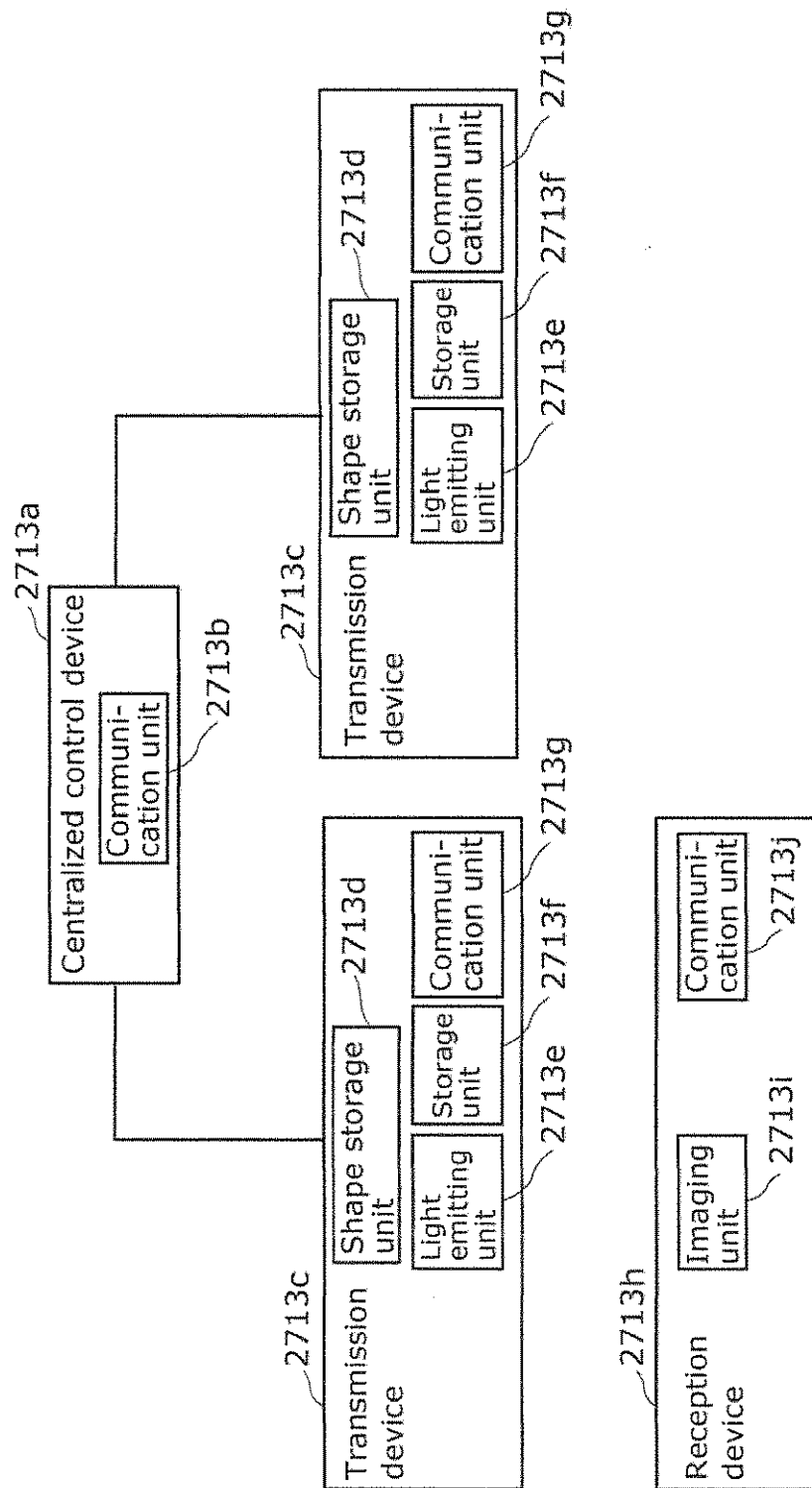


FIG. 146

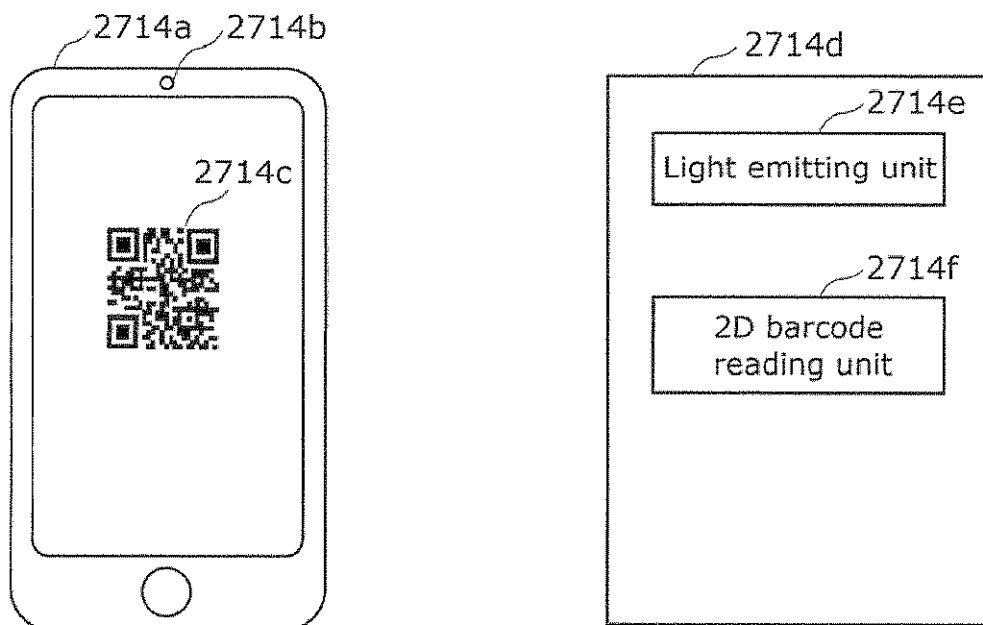


FIG. 147

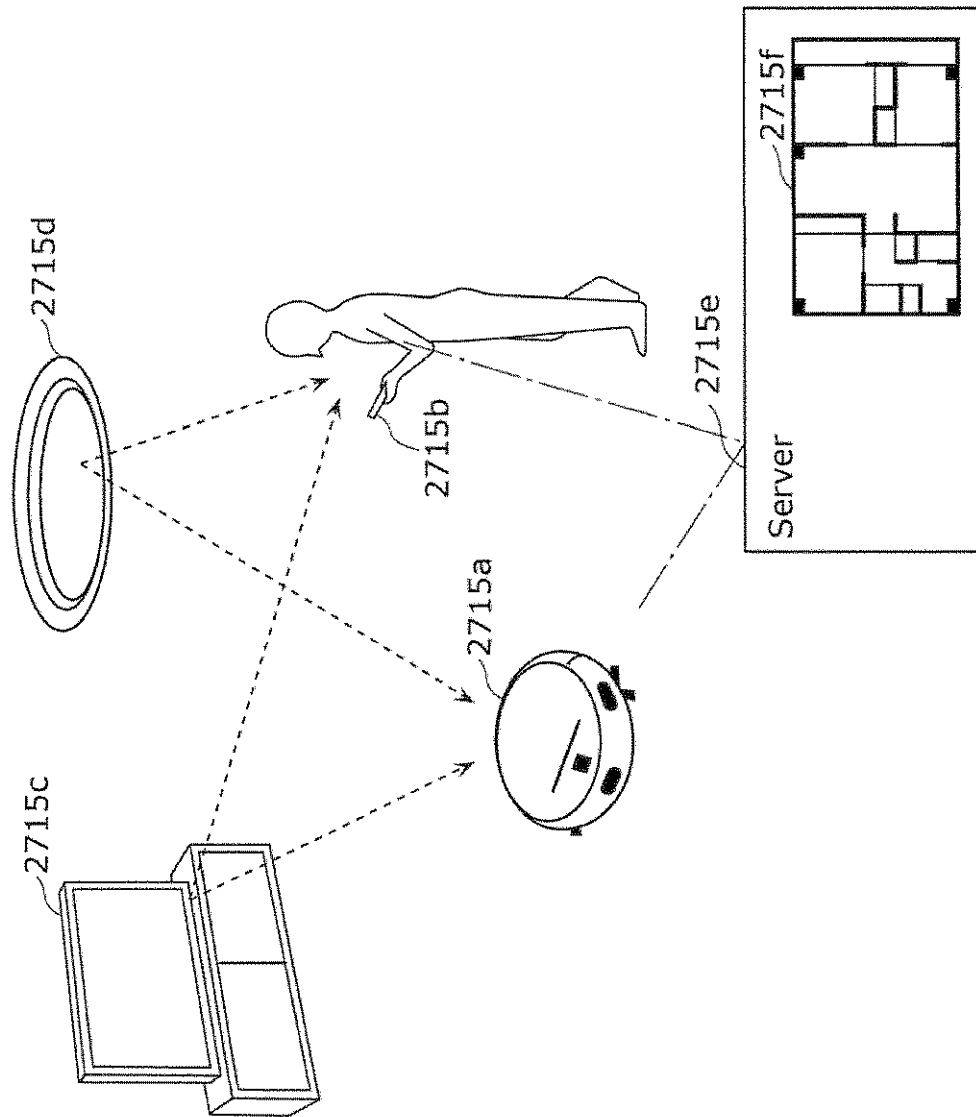


FIG. 148

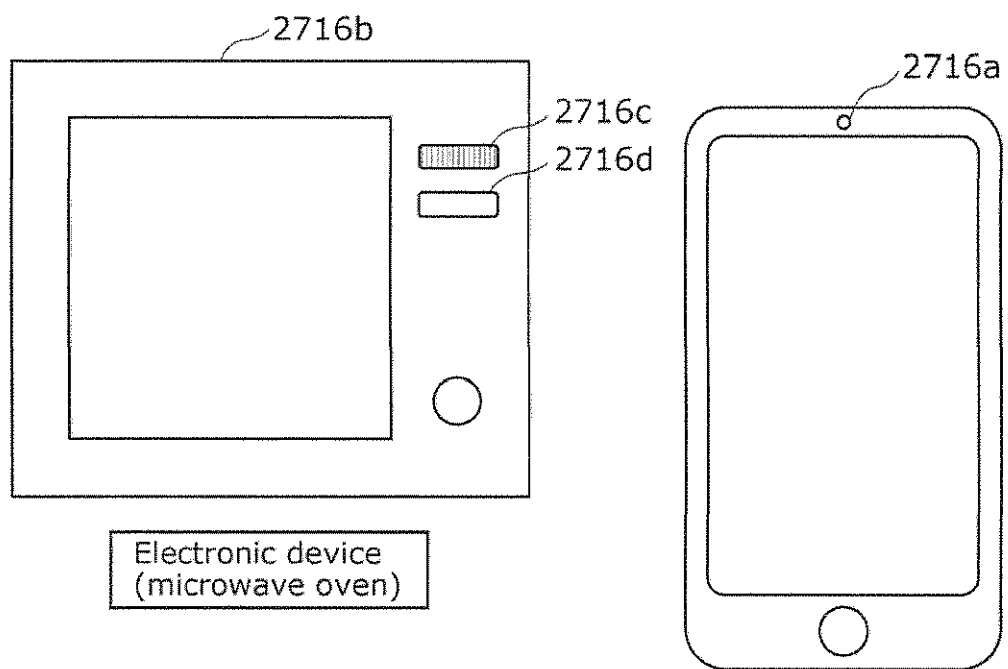


FIG. 149

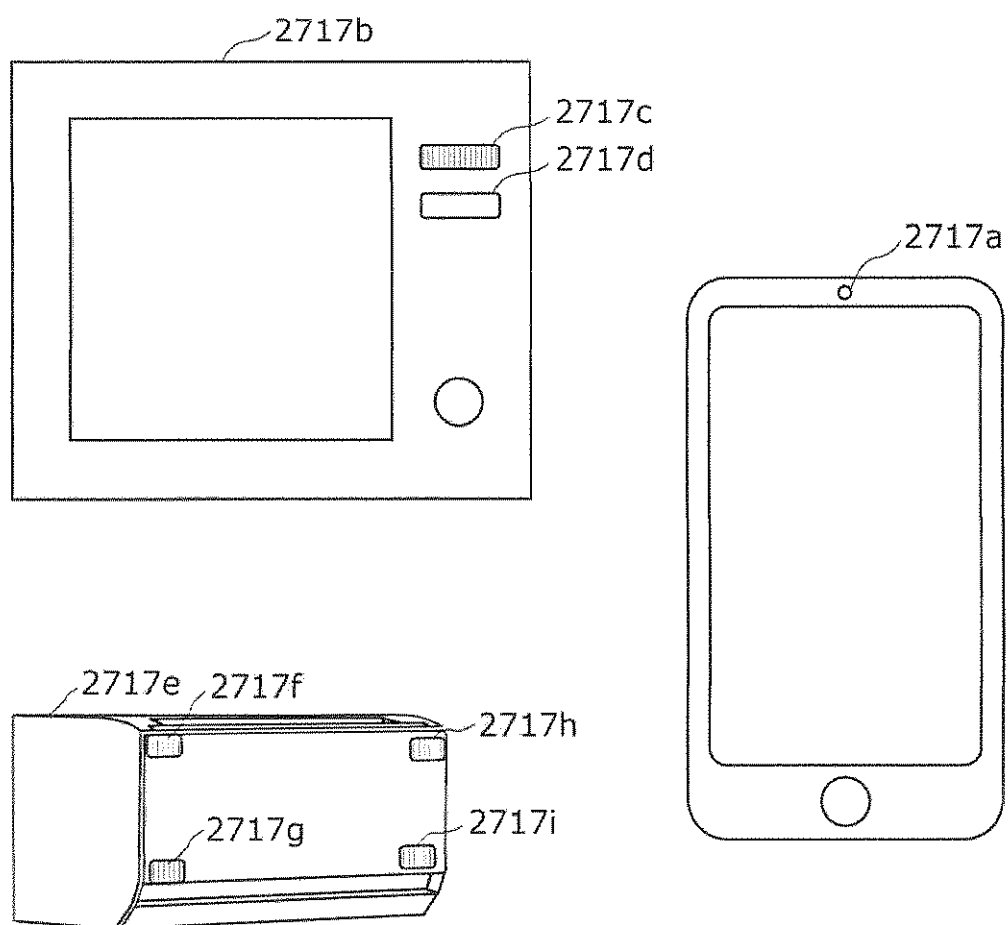


FIG. 150

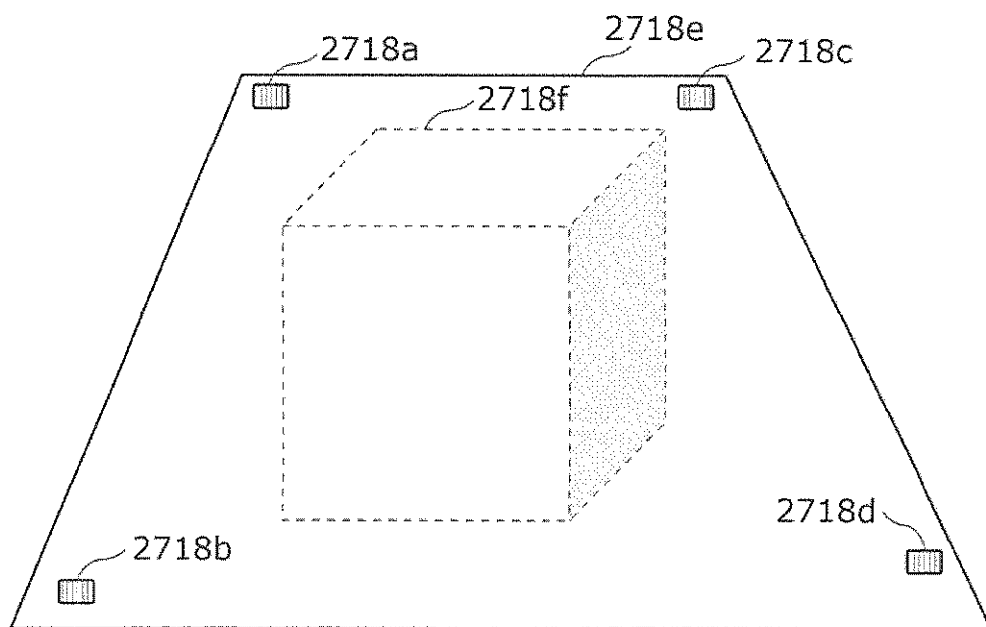


FIG. 151

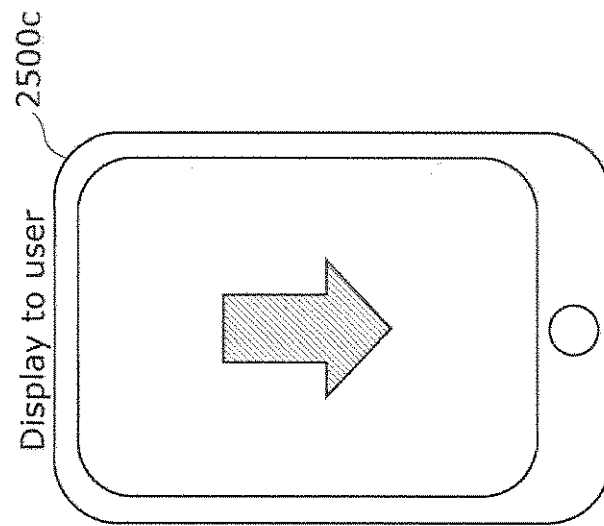
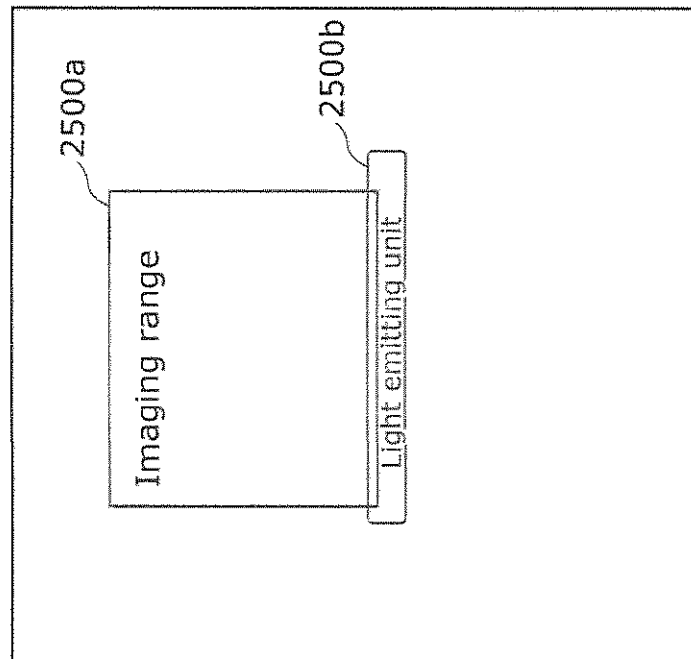


FIG. 152

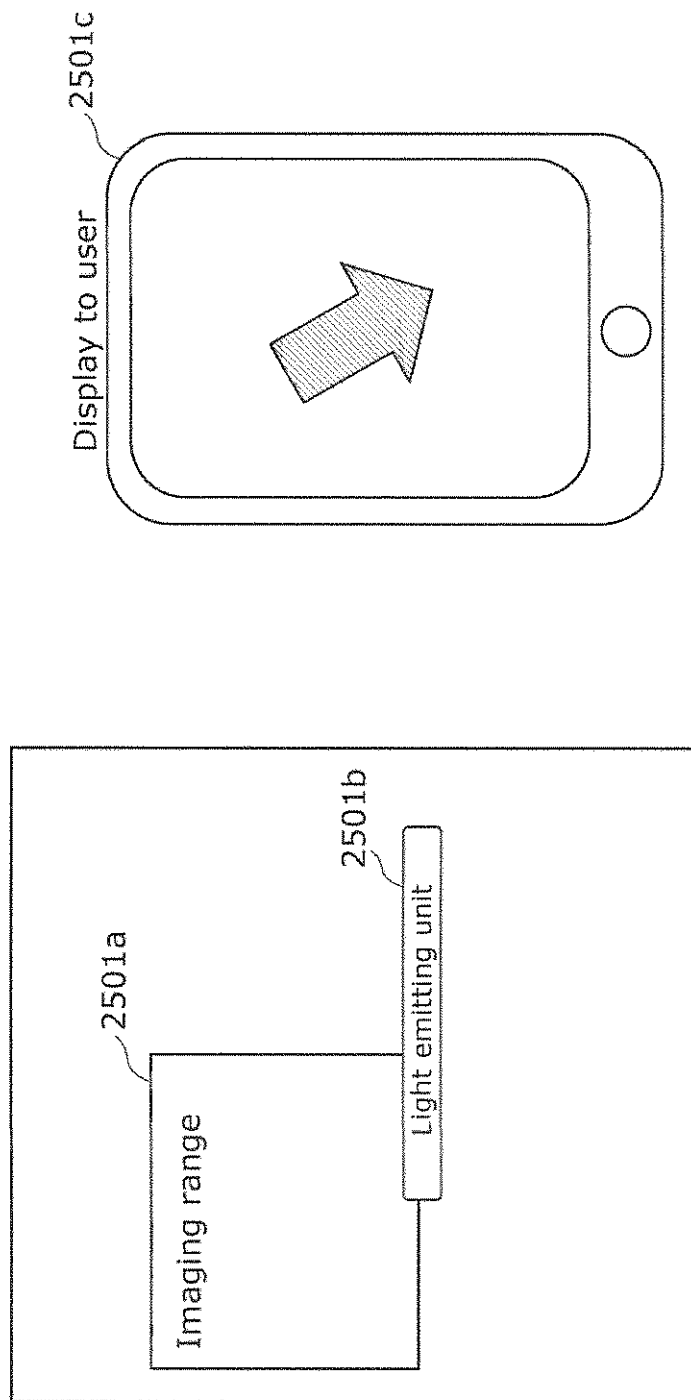


FIG. 153

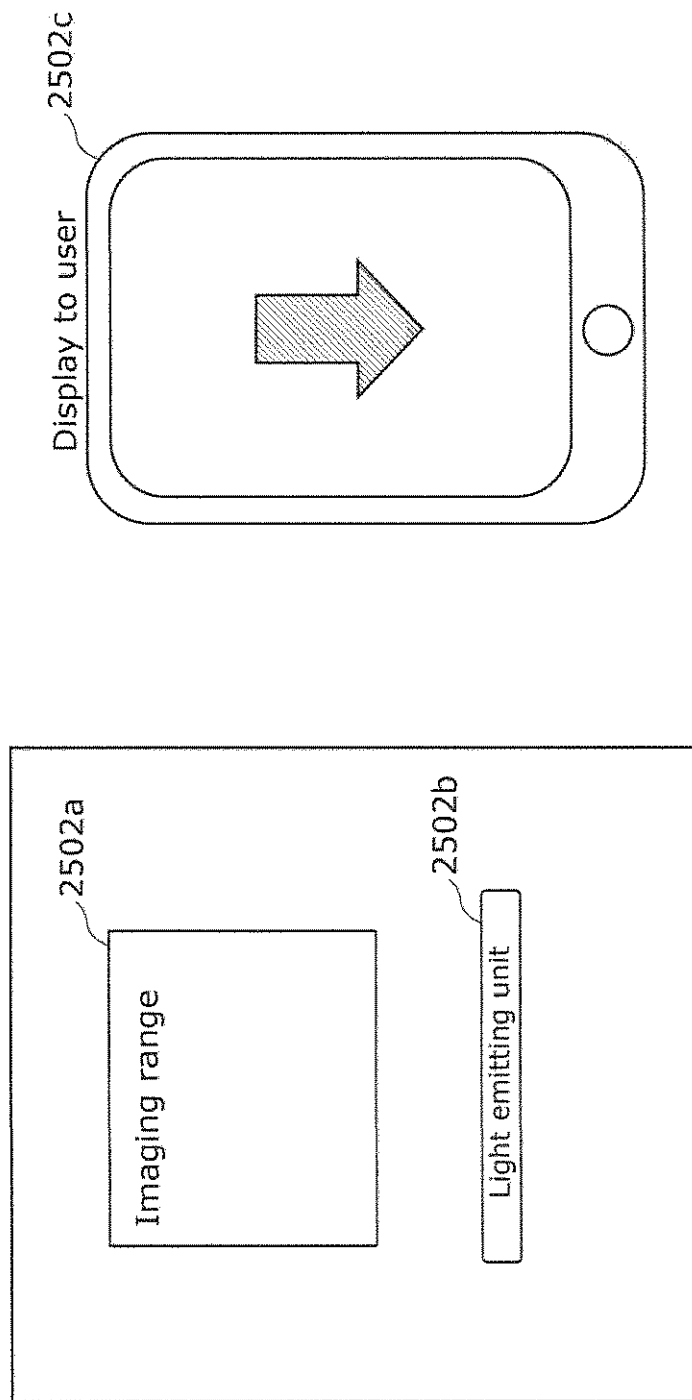


FIG. 154

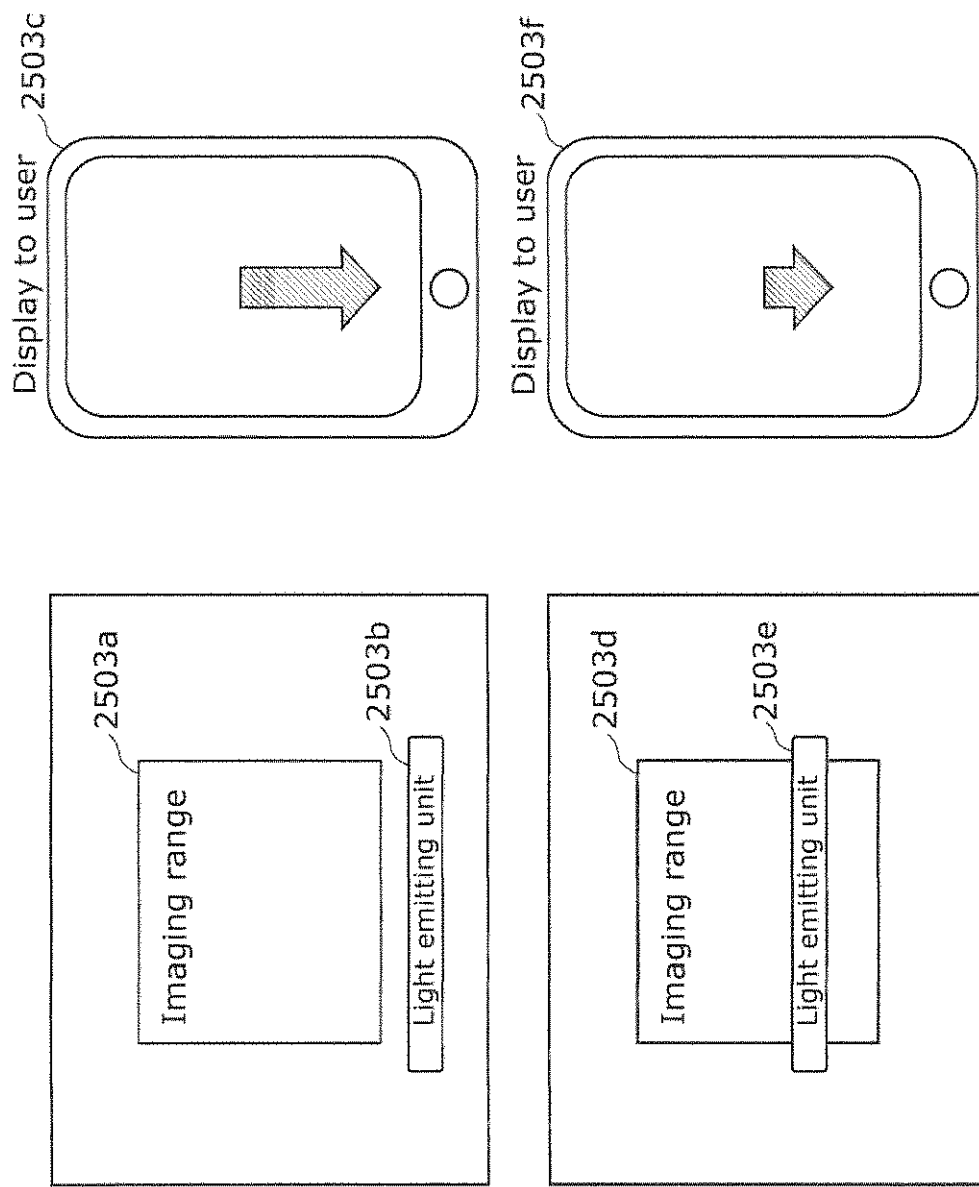


FIG. 155

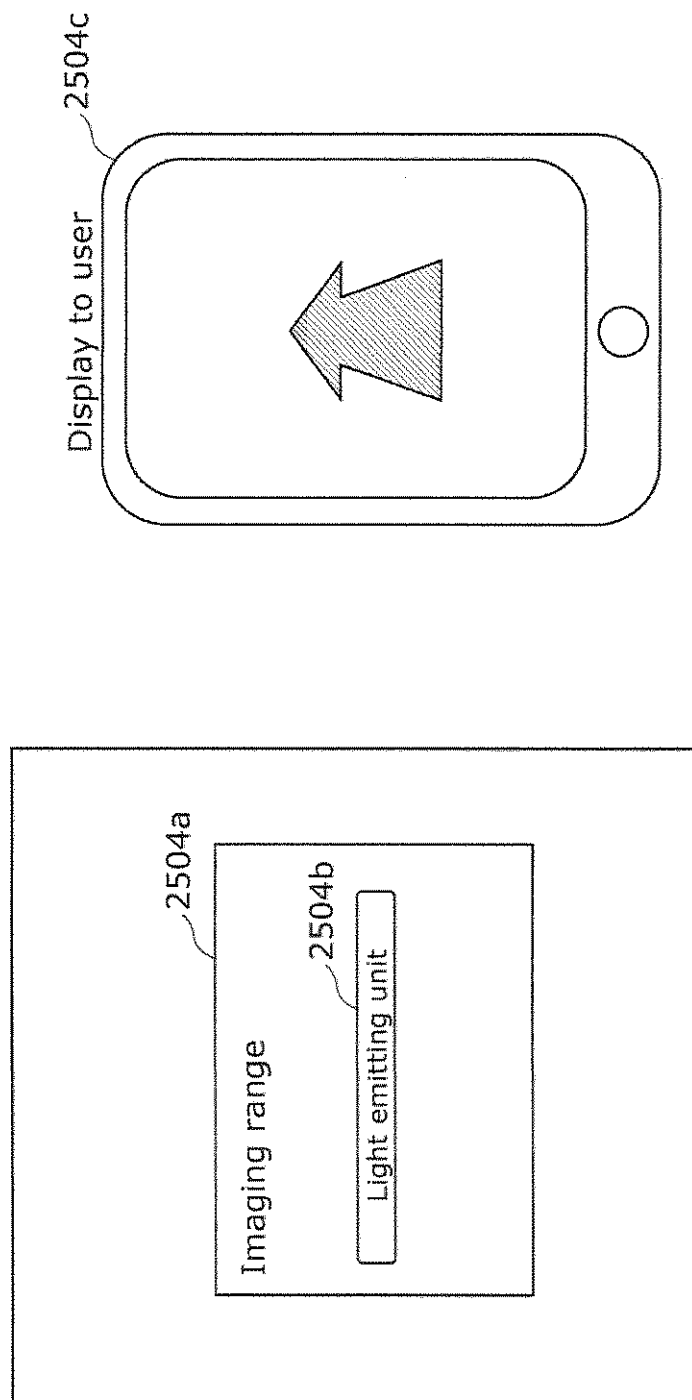


FIG. 156

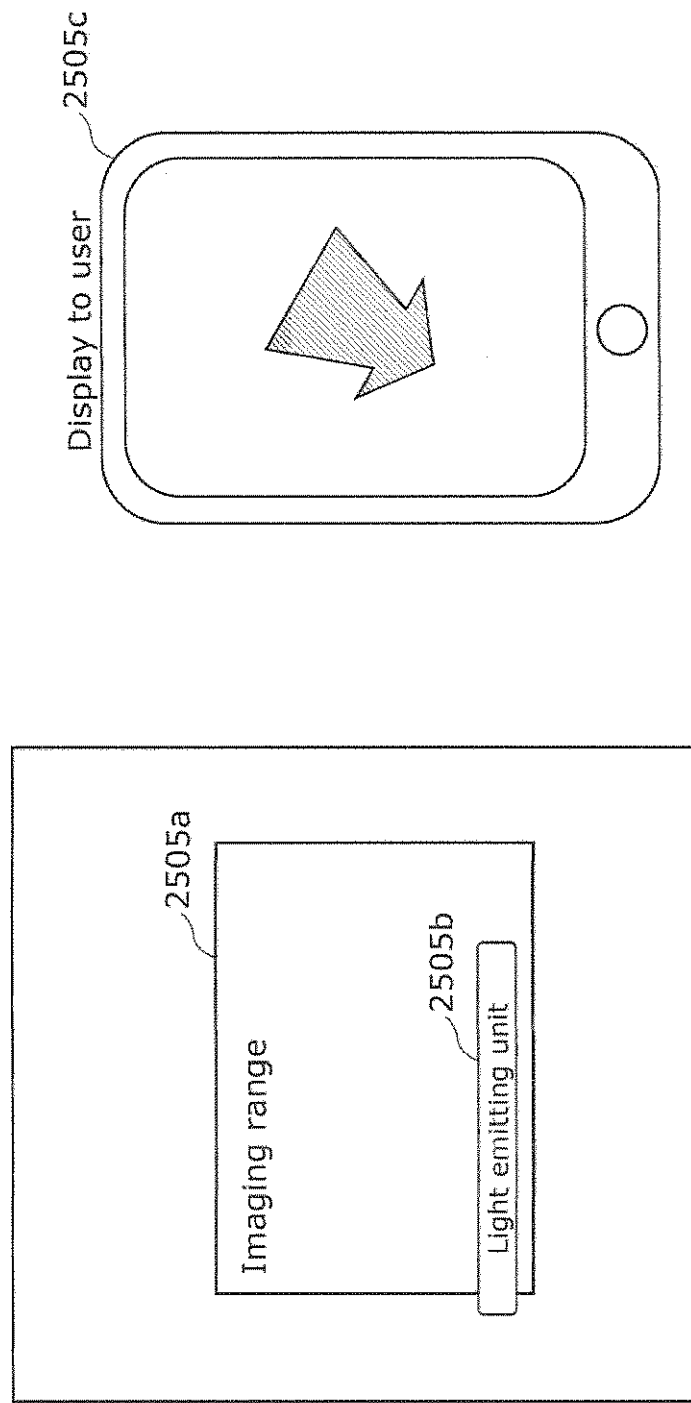


FIG. 157

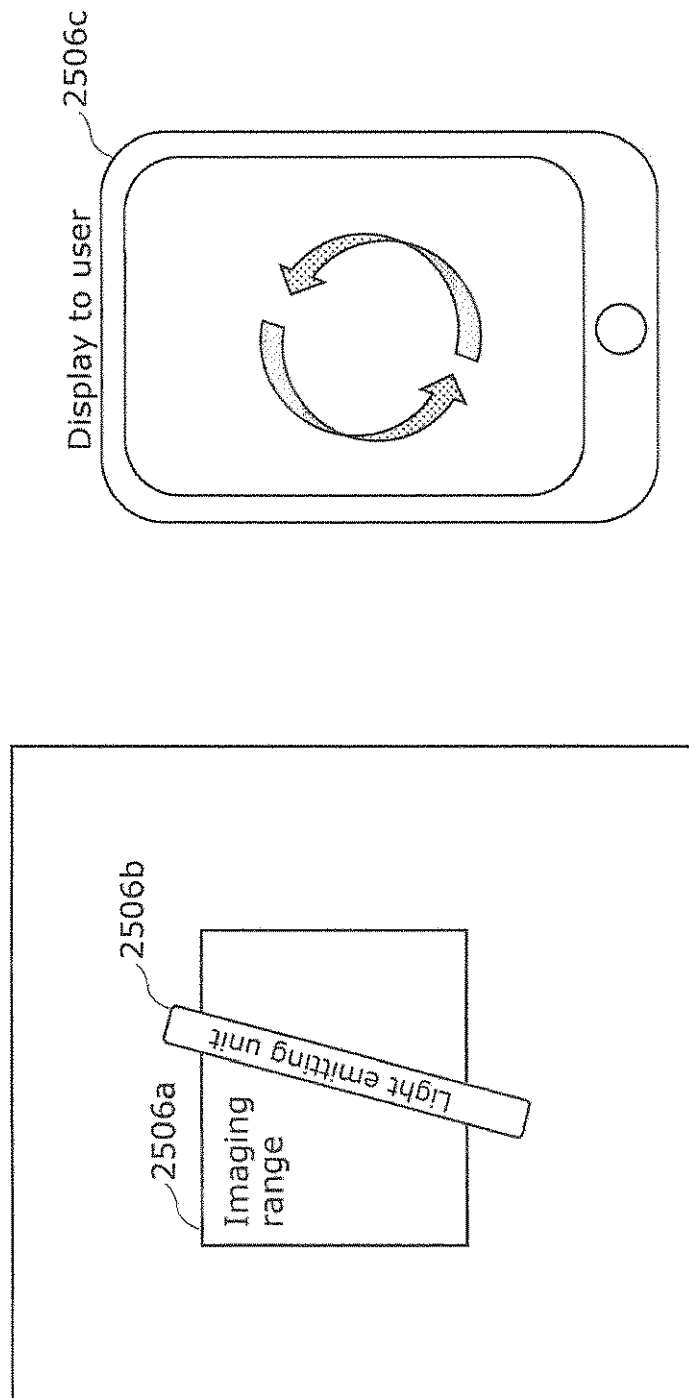
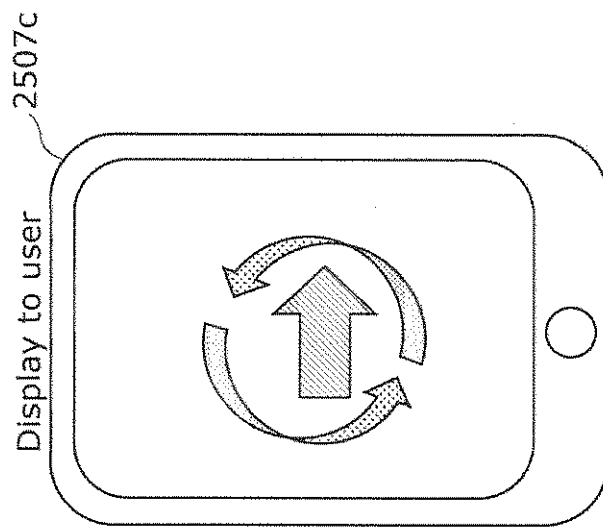
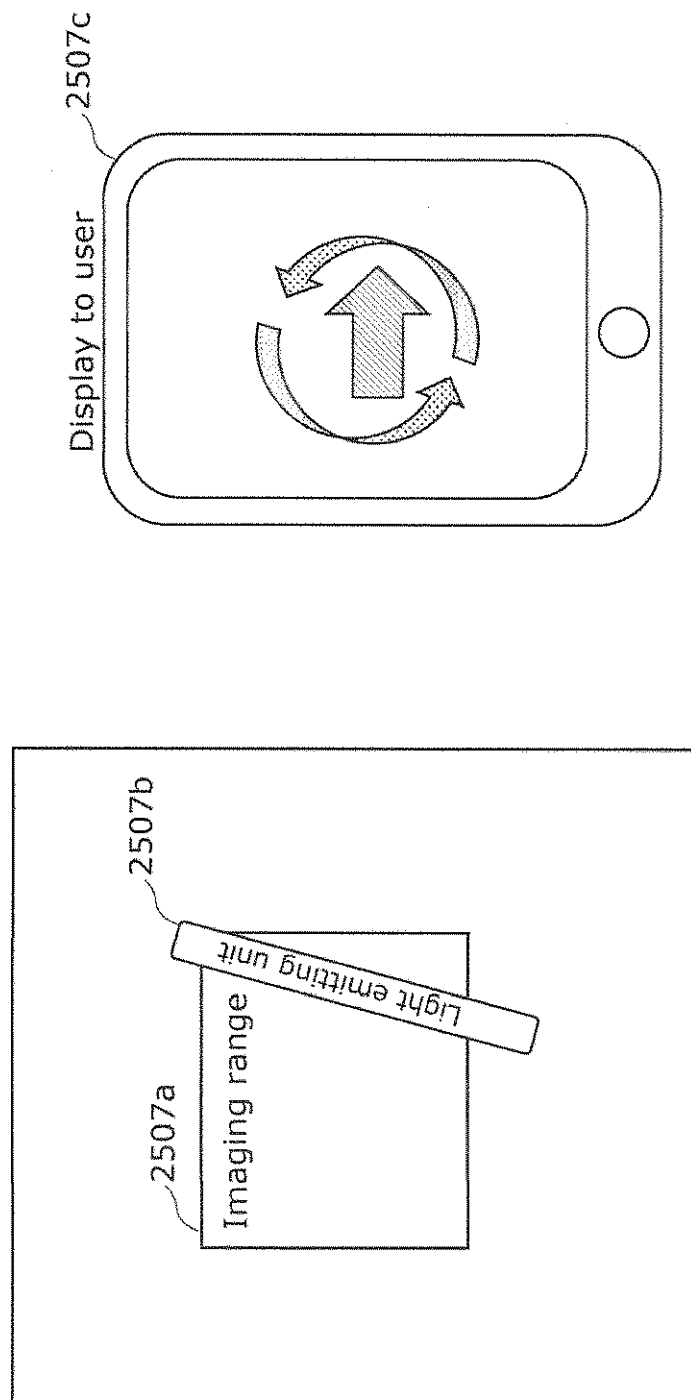


FIG. 158



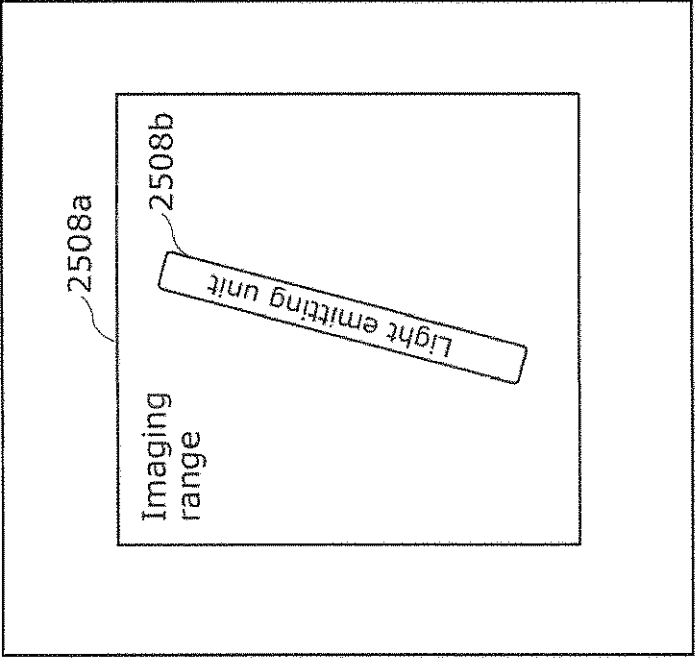


FIG. 159

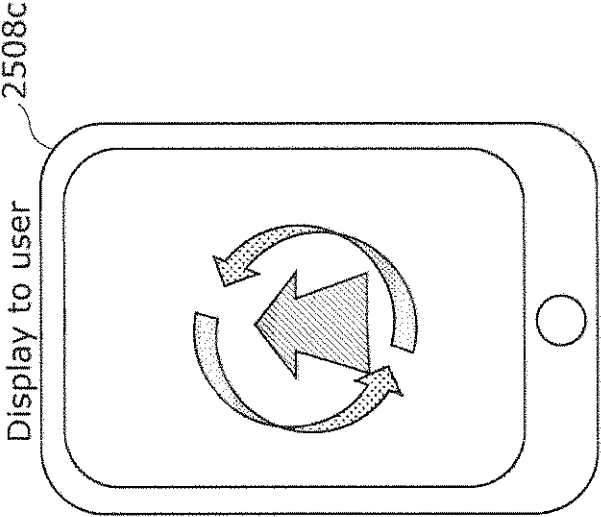


FIG. 160

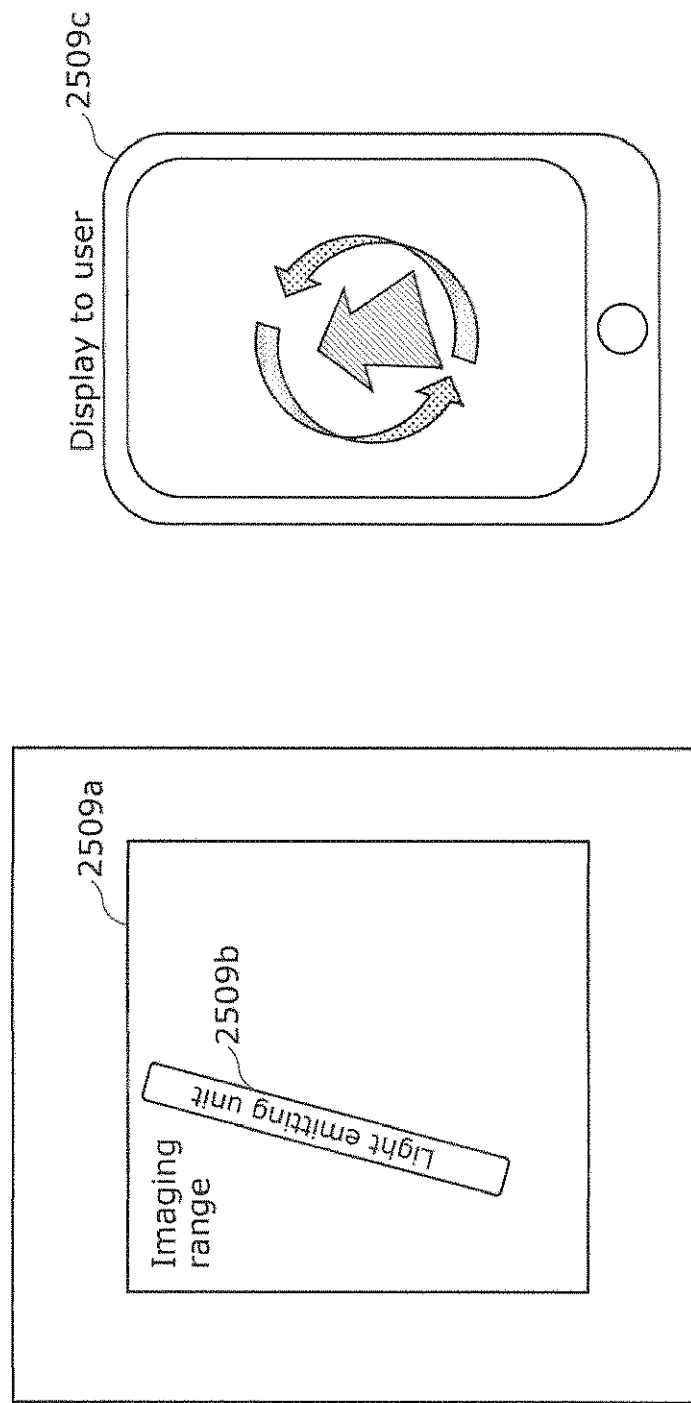


FIG. 161

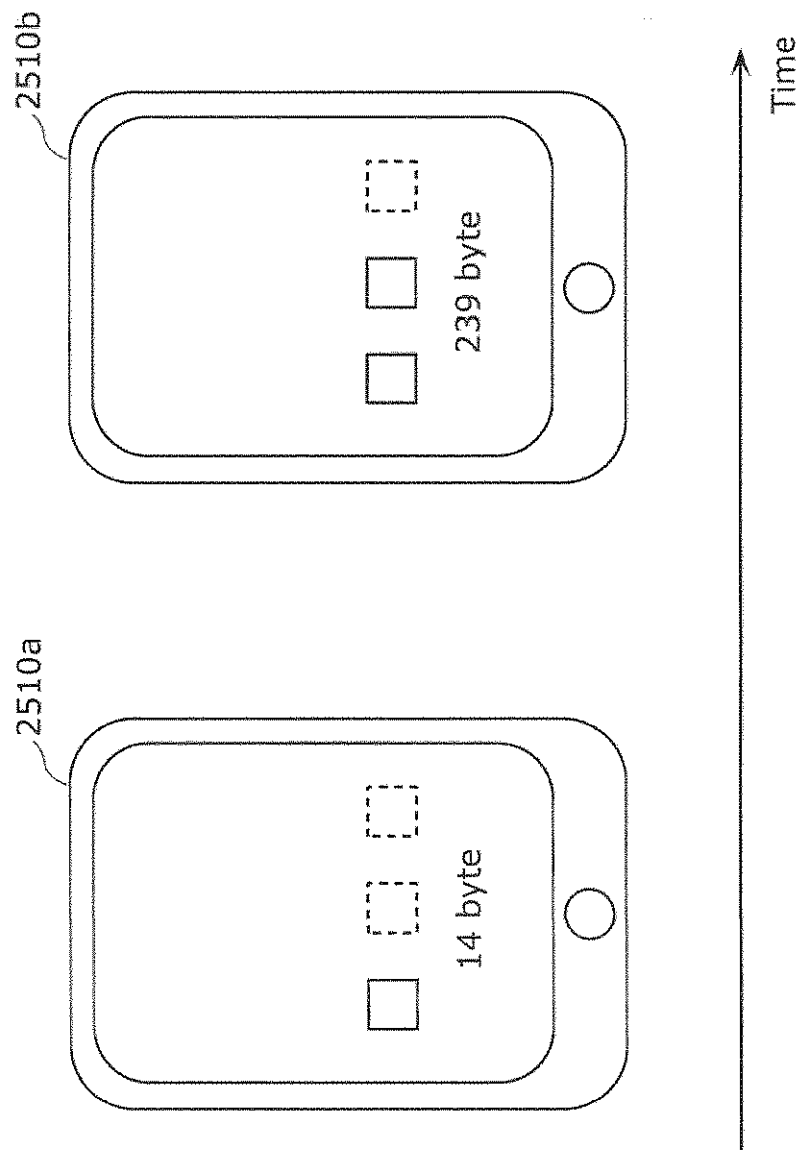


FIG. 162

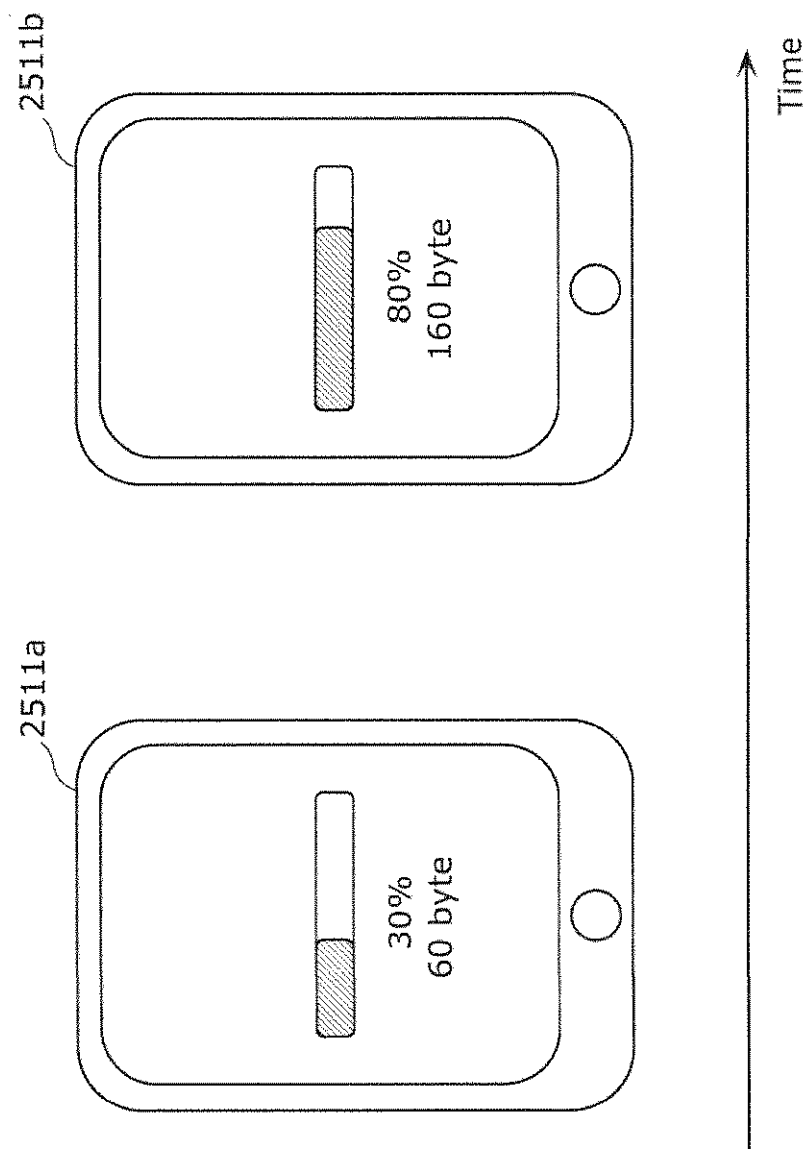


FIG. 163

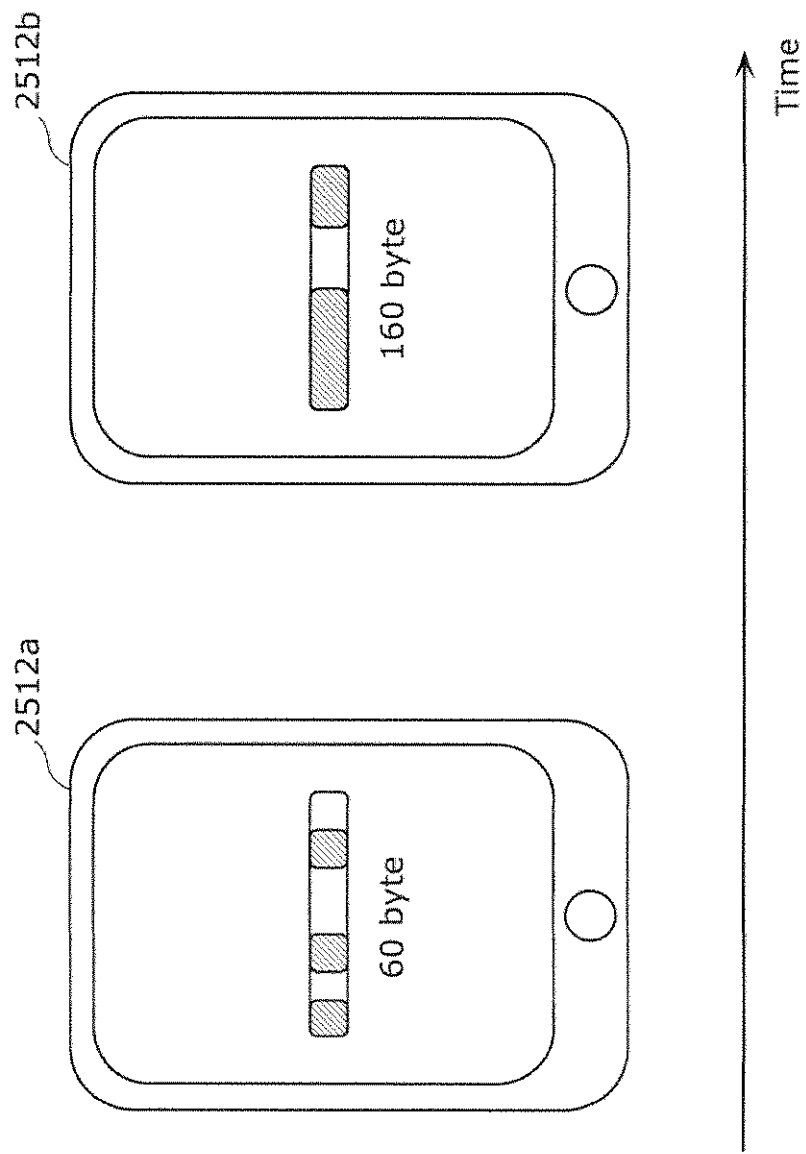


FIG. 164

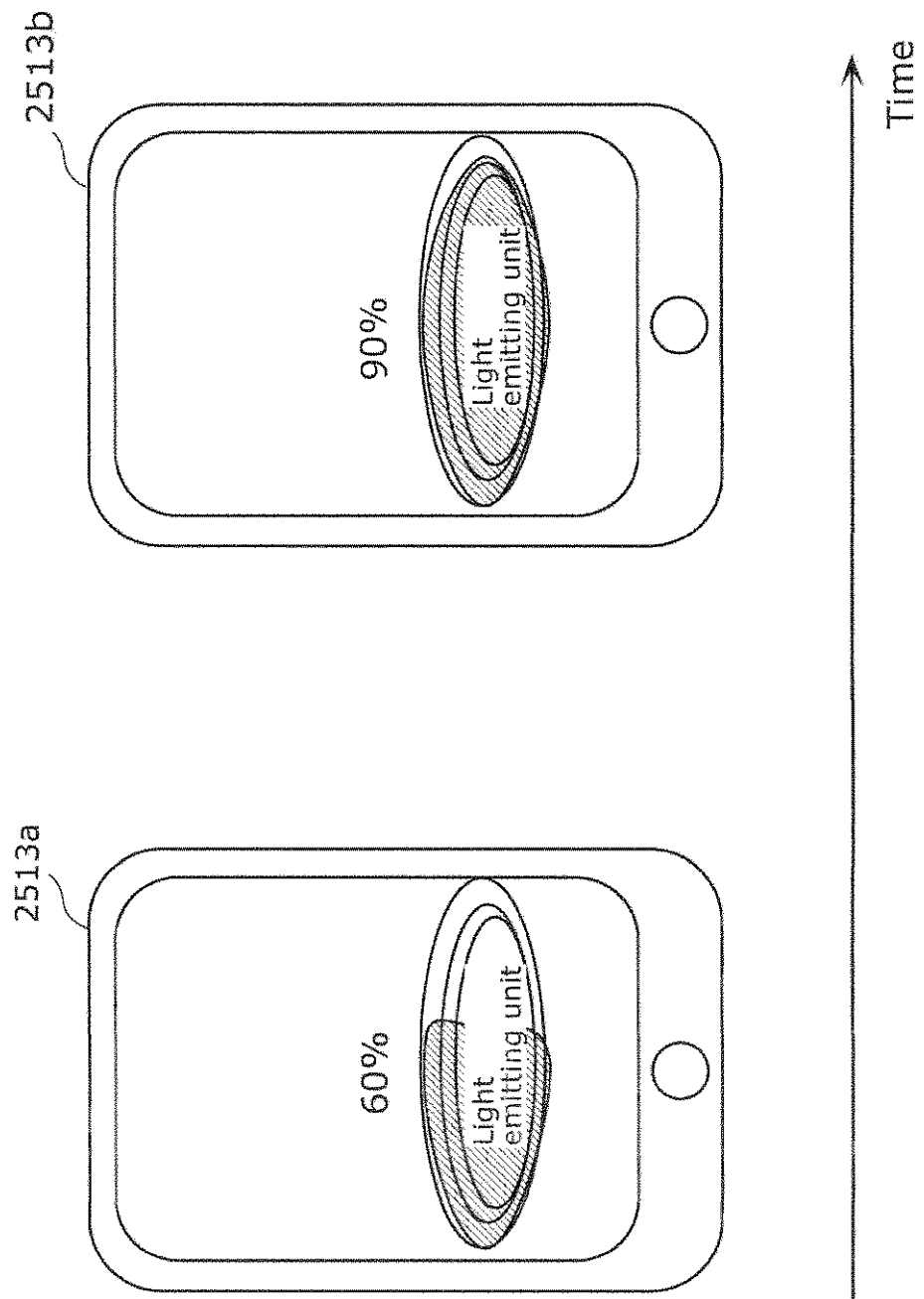


FIG. 165

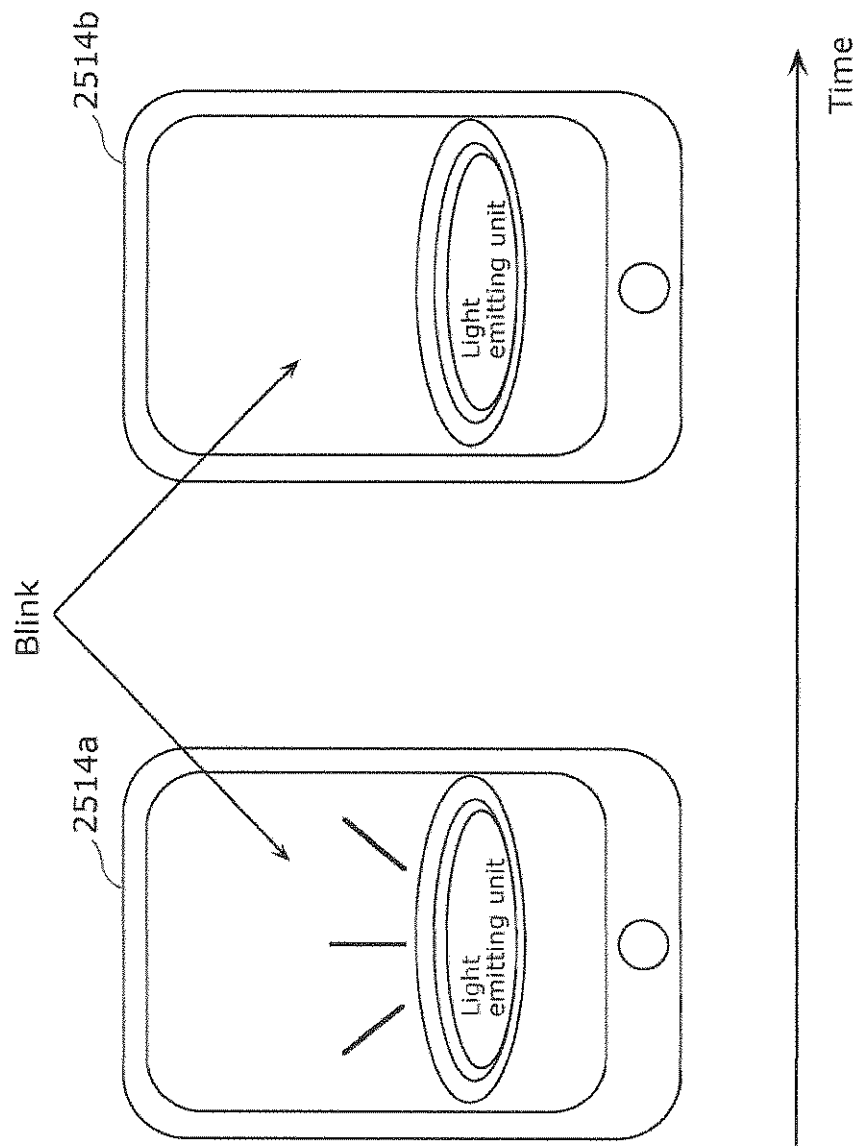


FIG. 166

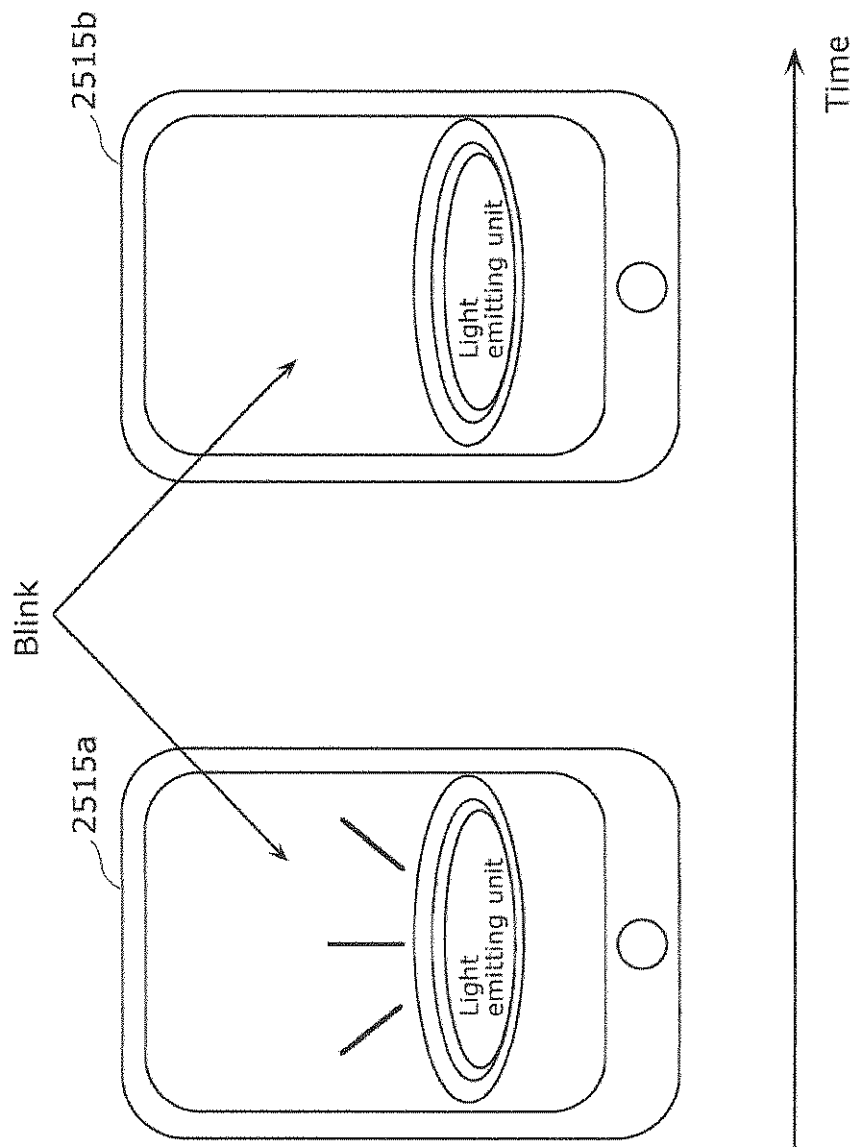


FIG. 167

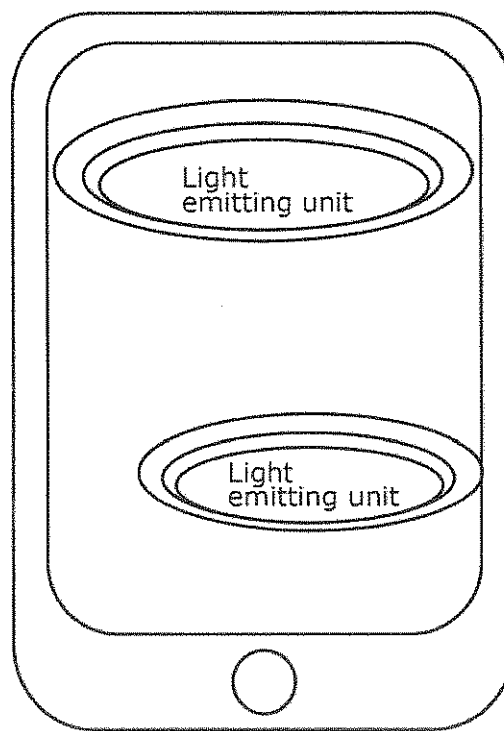


FIG. 168

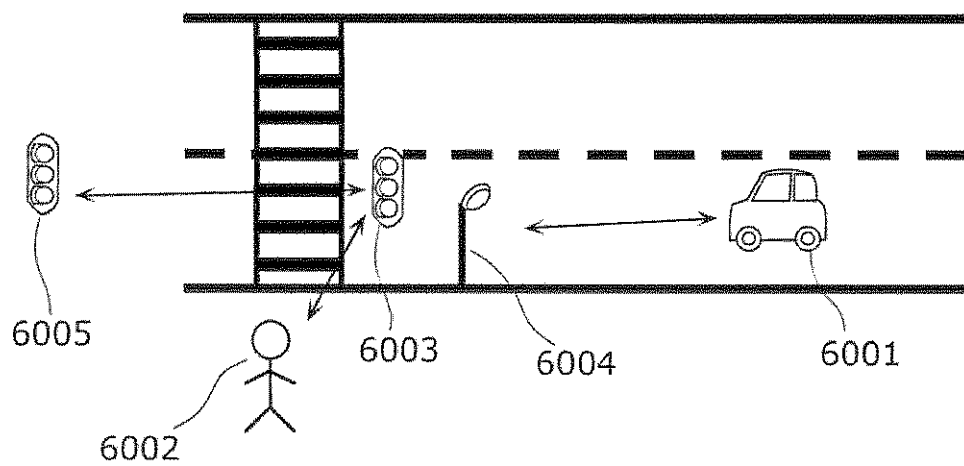


FIG. 169

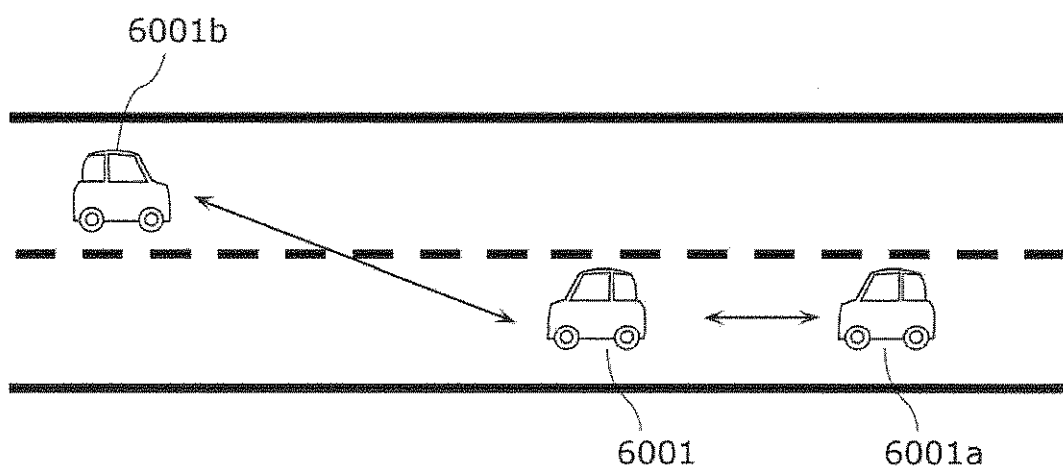


FIG. 170

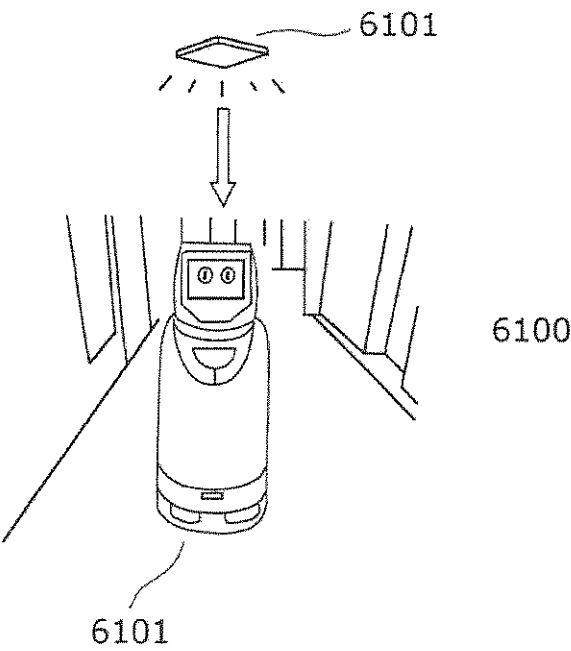


FIG. 171

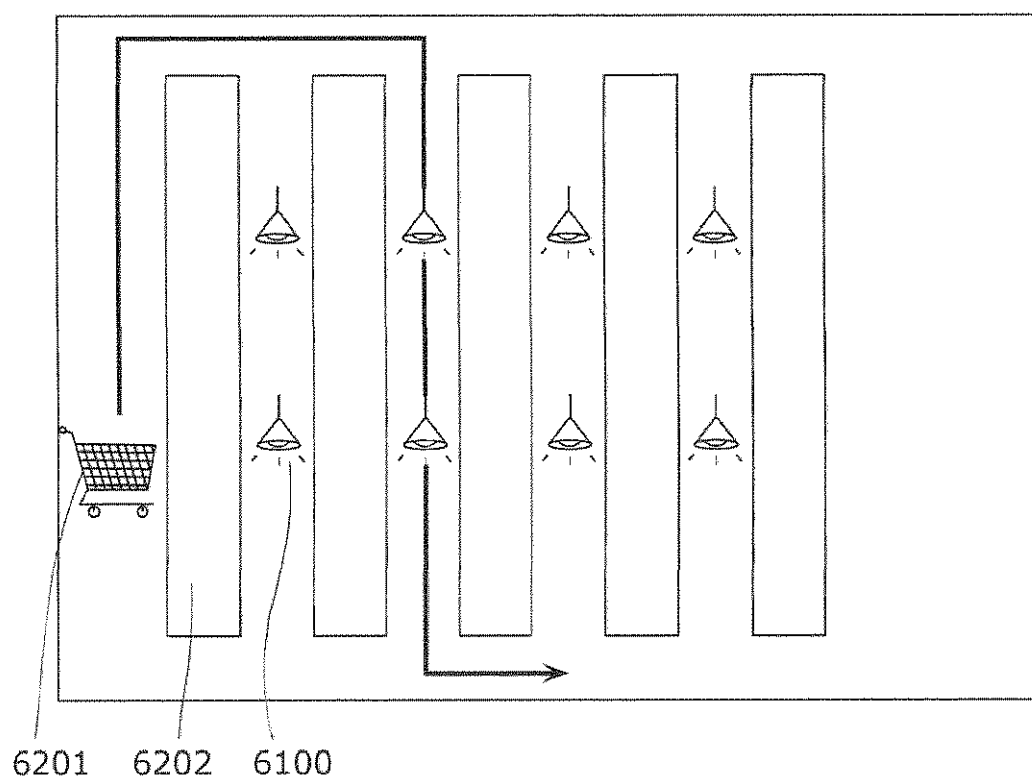


FIG. 172

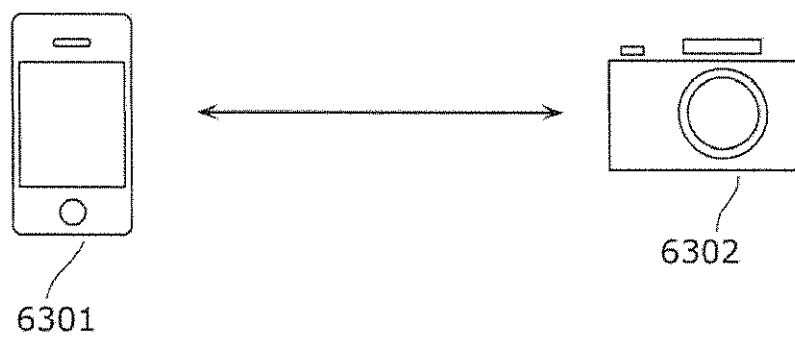


FIG. 173

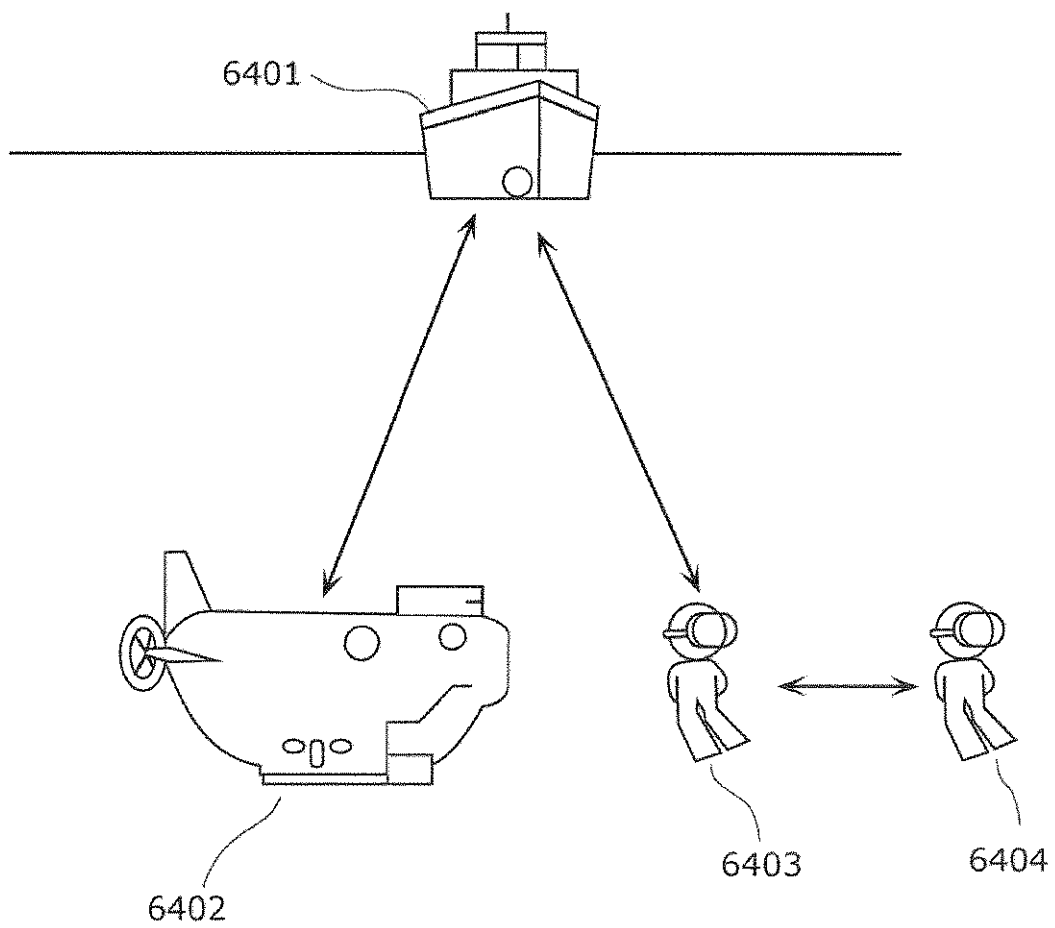


FIG. 174

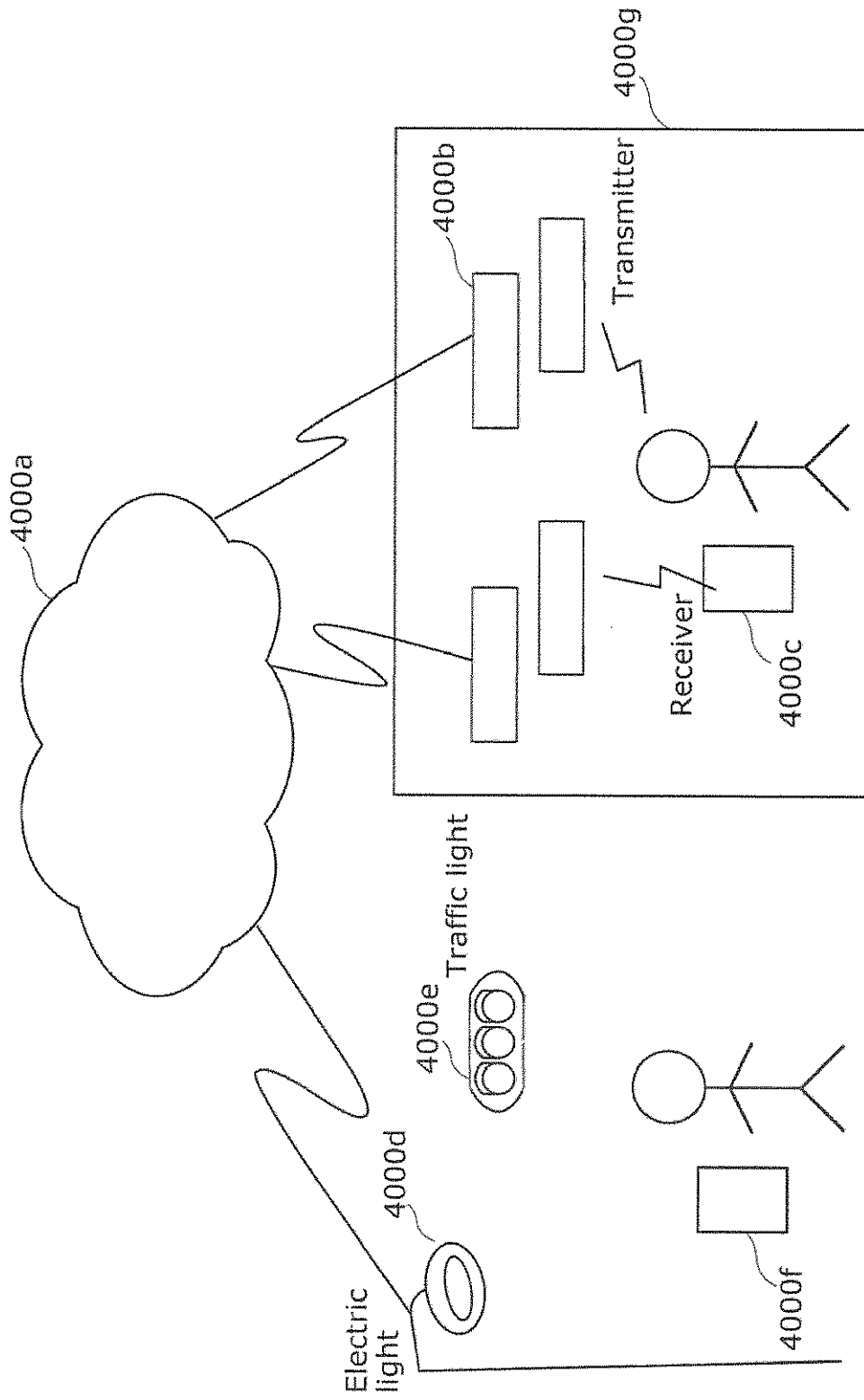


FIG. 175

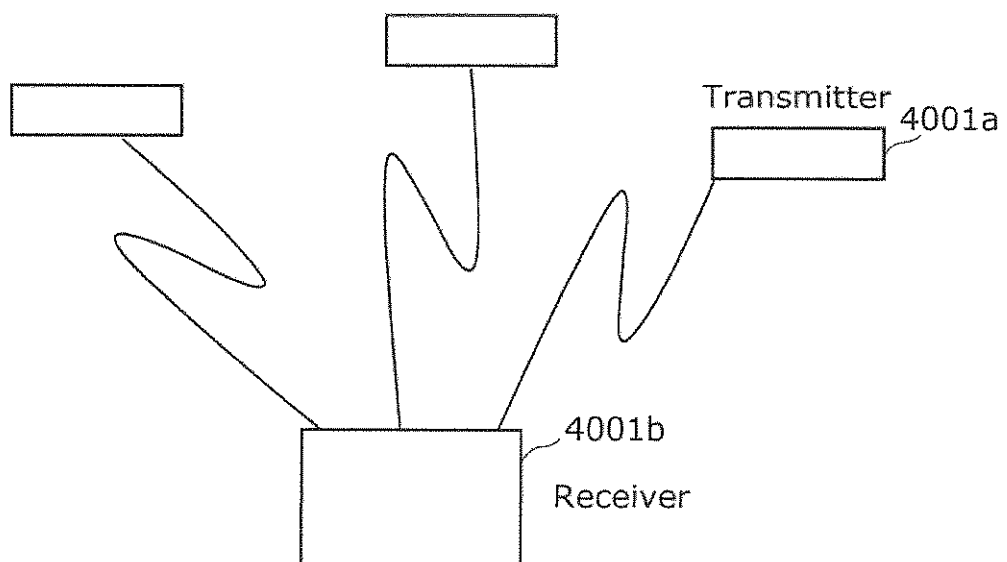


FIG. 176

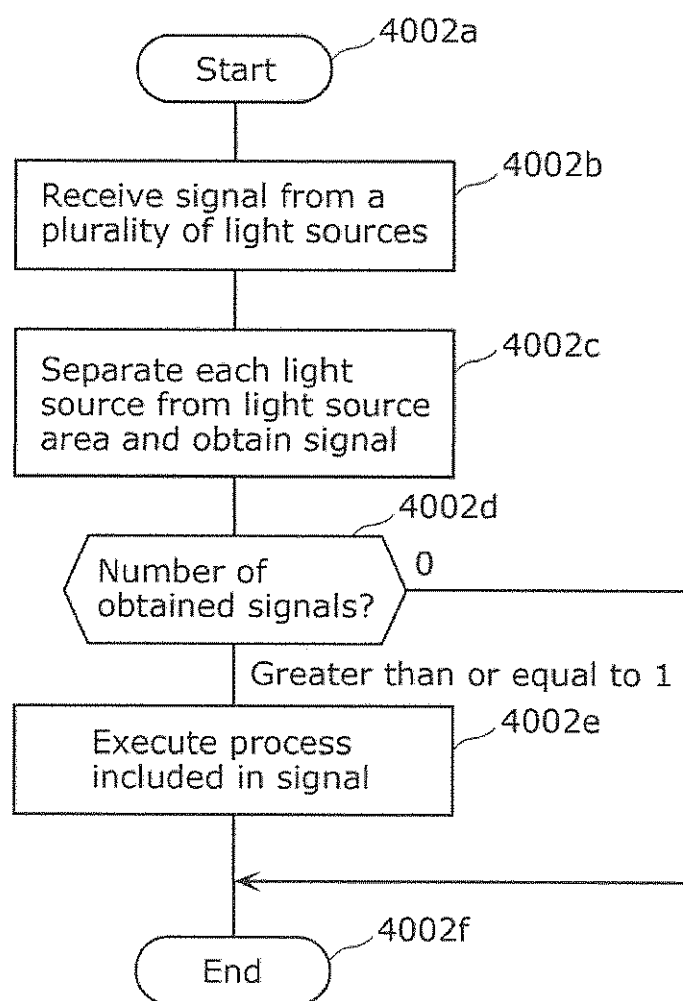


FIG. 177

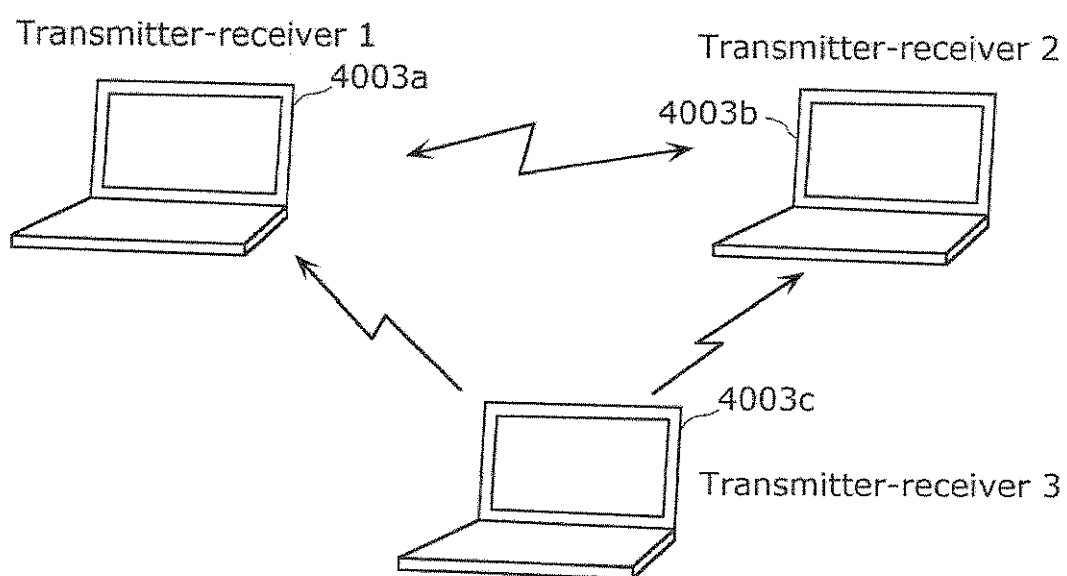


FIG. 178

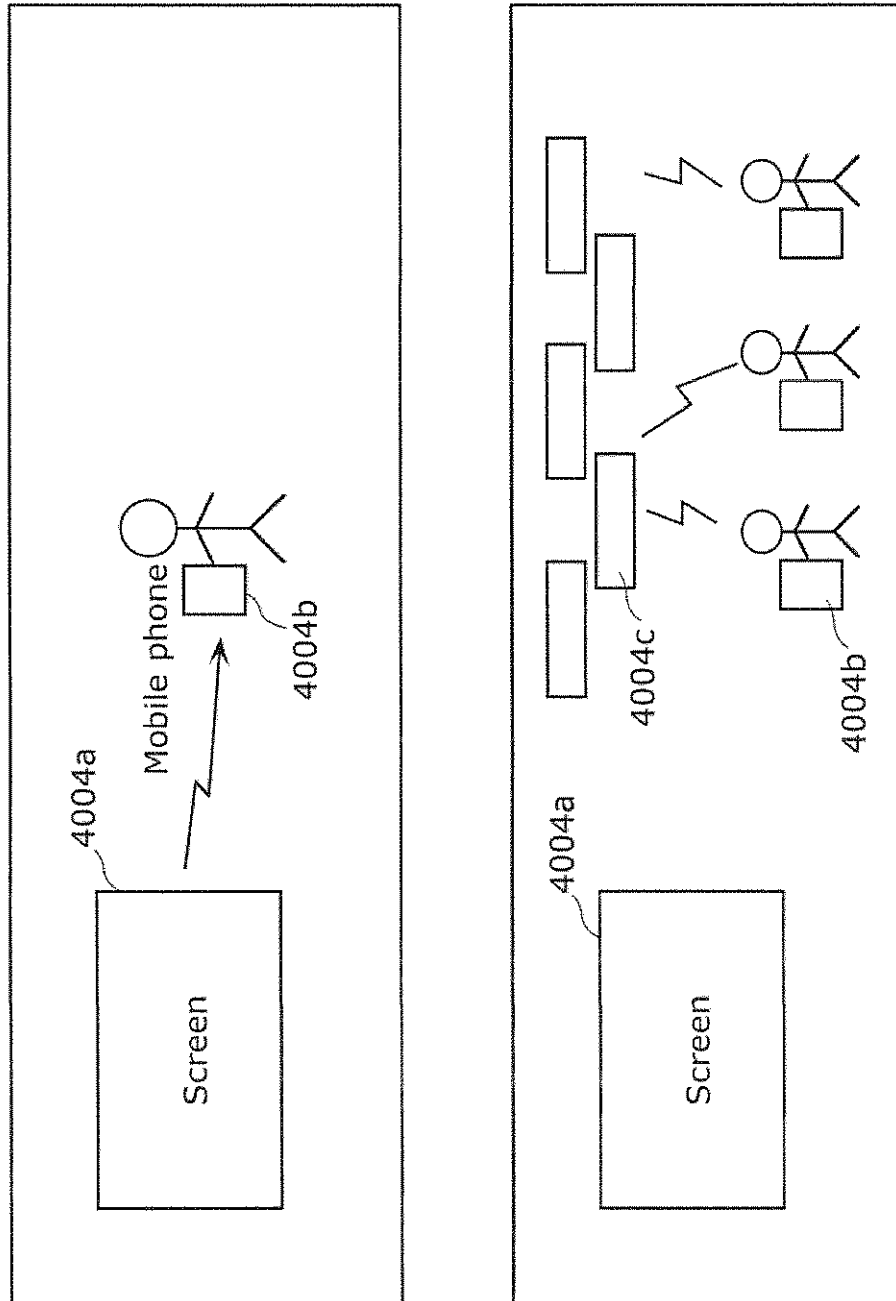


FIG. 179

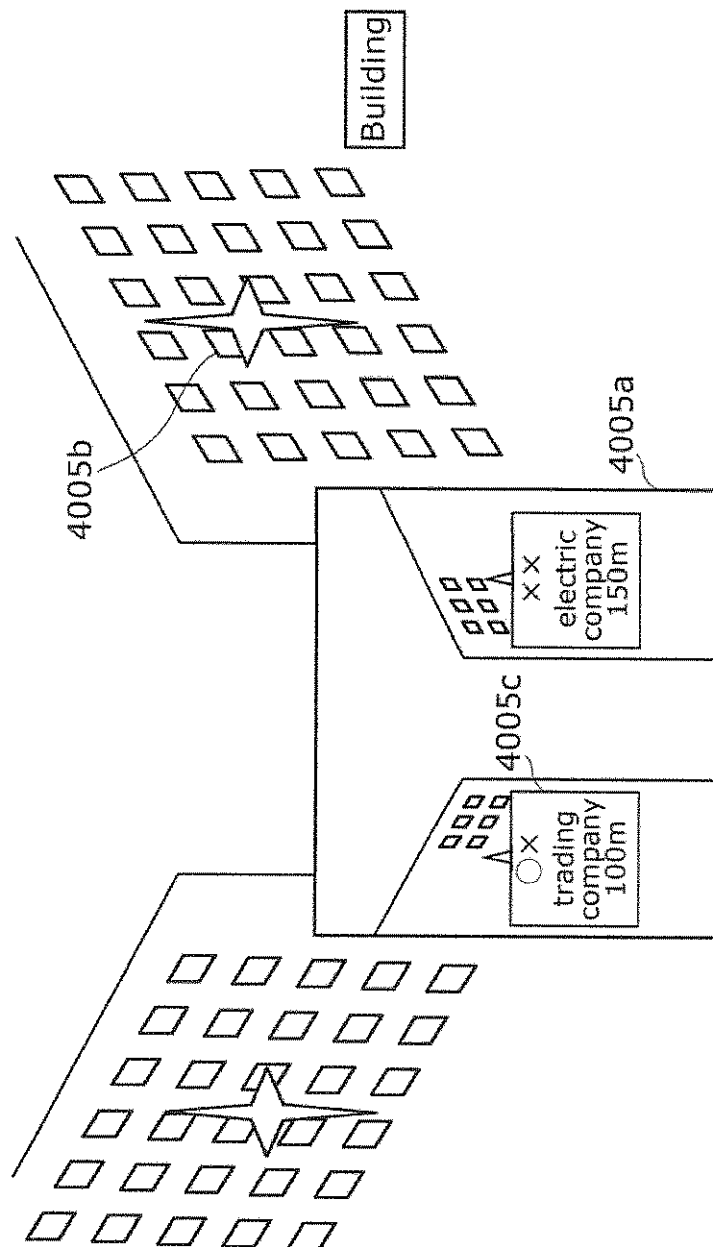


FIG. 180

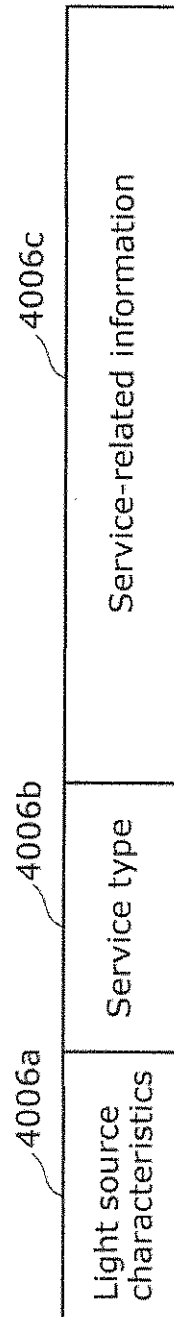


FIG. 181

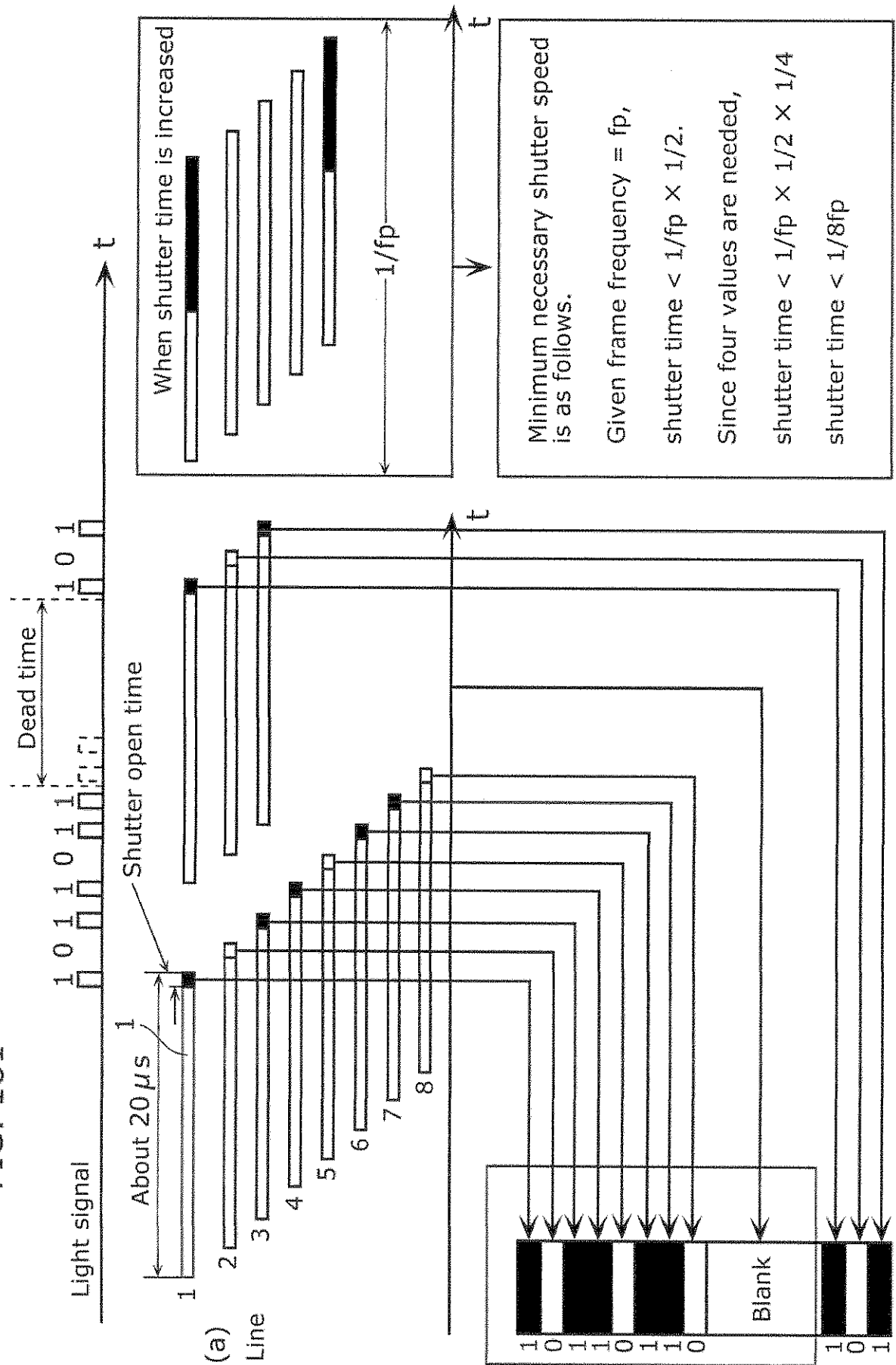


FIG. 182

(a) In the case of 2 lines per symbol

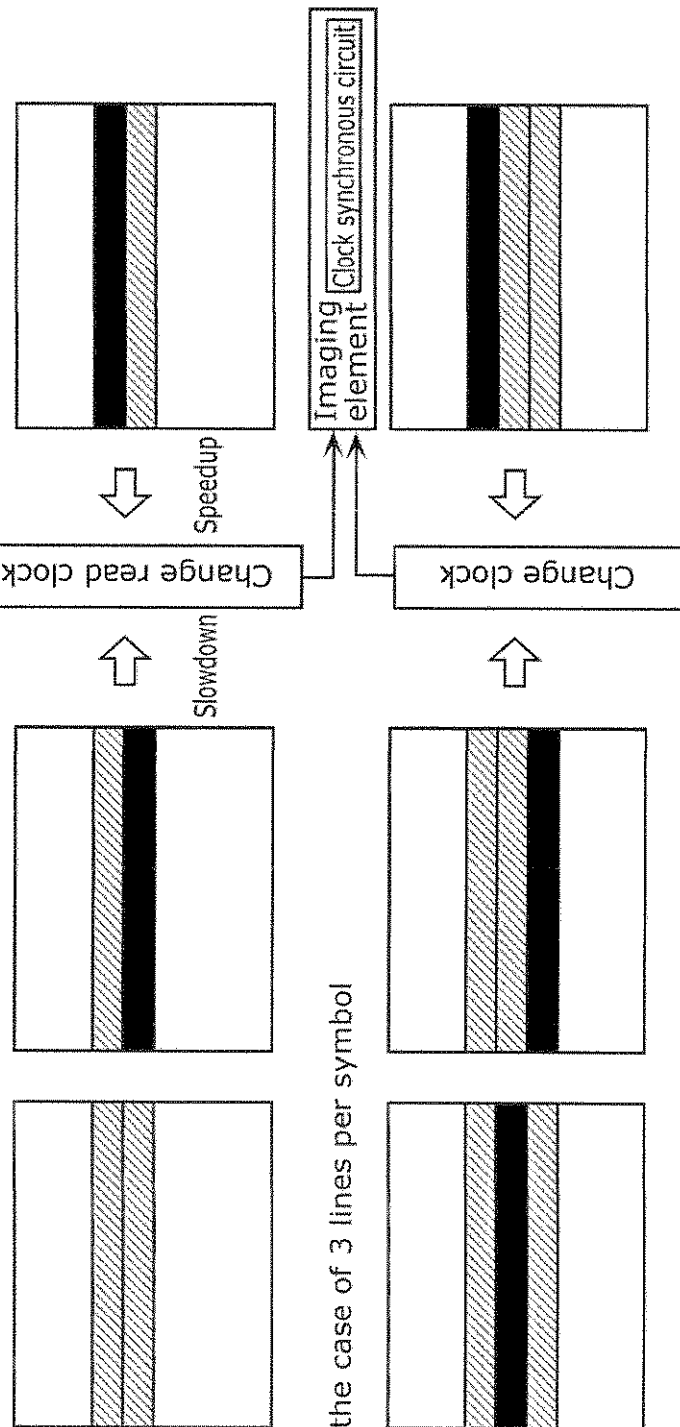


FIG. 183

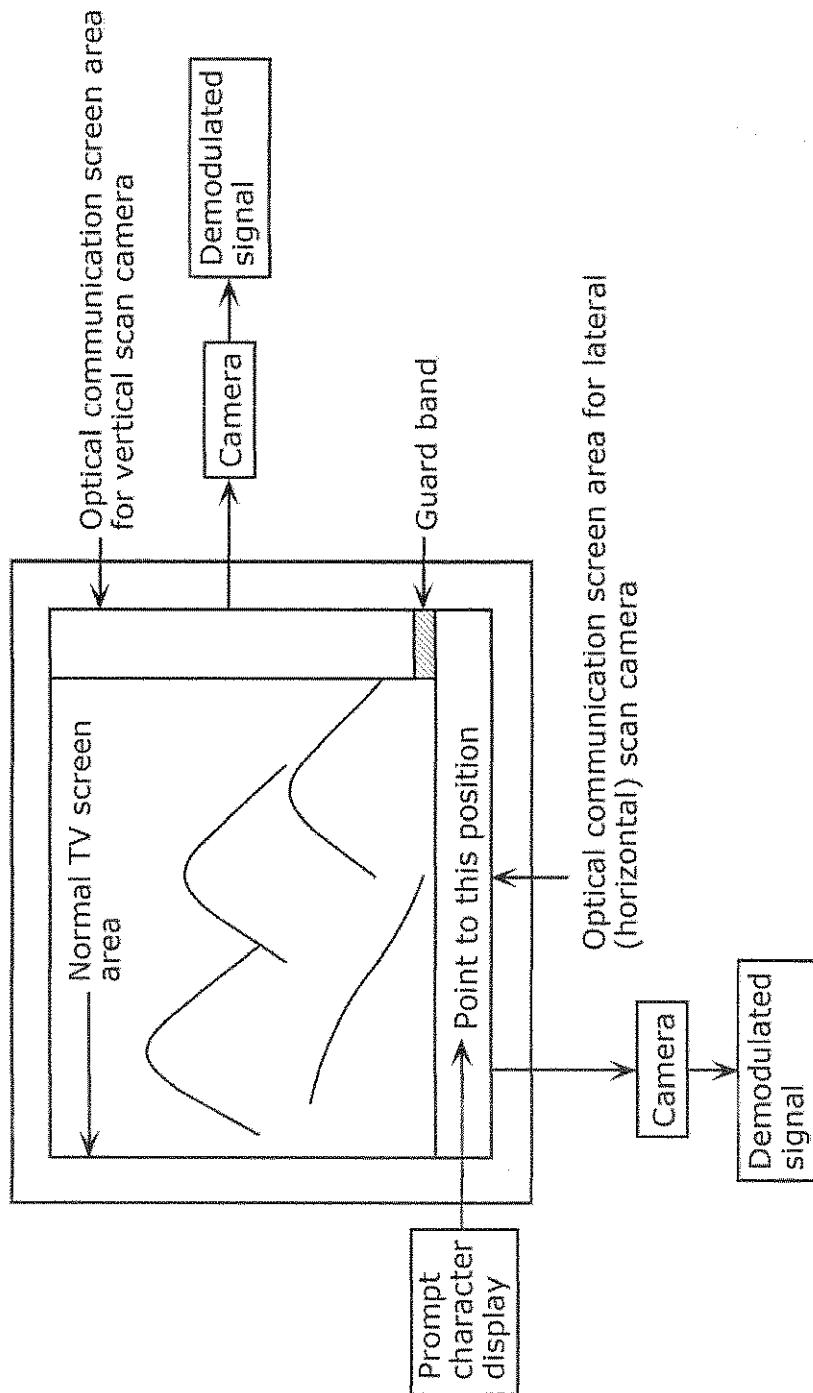


FIG. 184

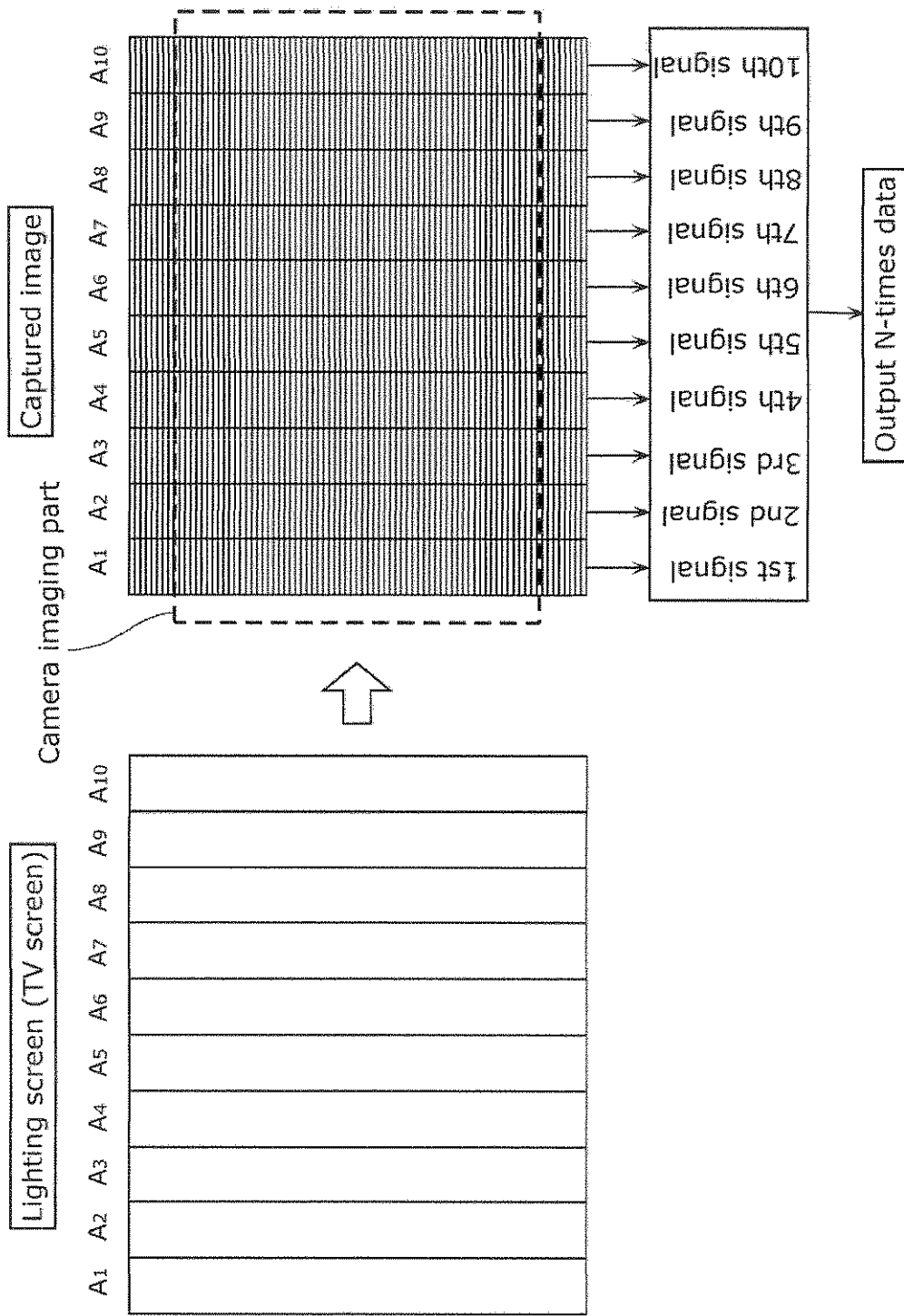


FIG. 185

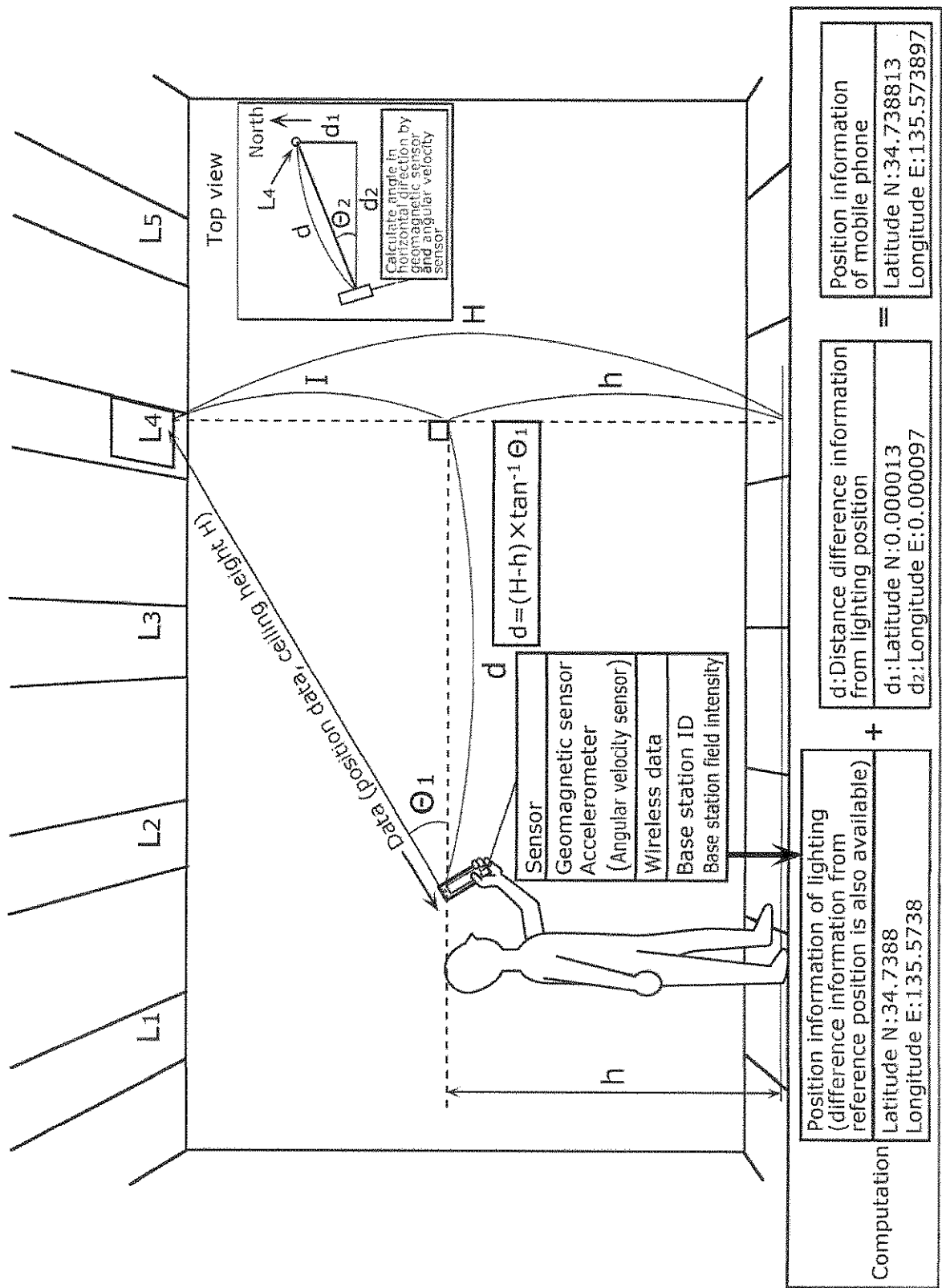


FIG. 186A

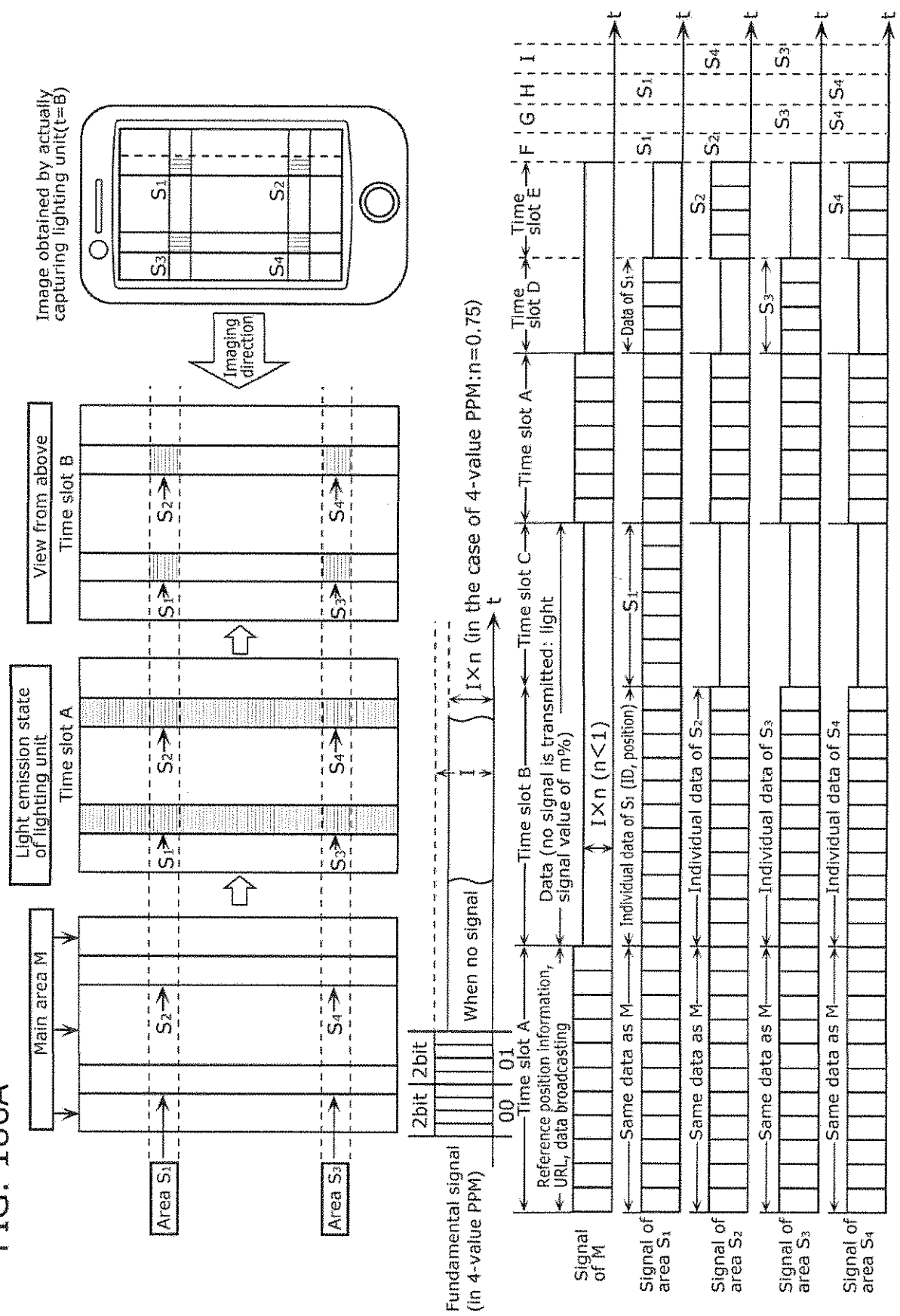


FIG. 186B

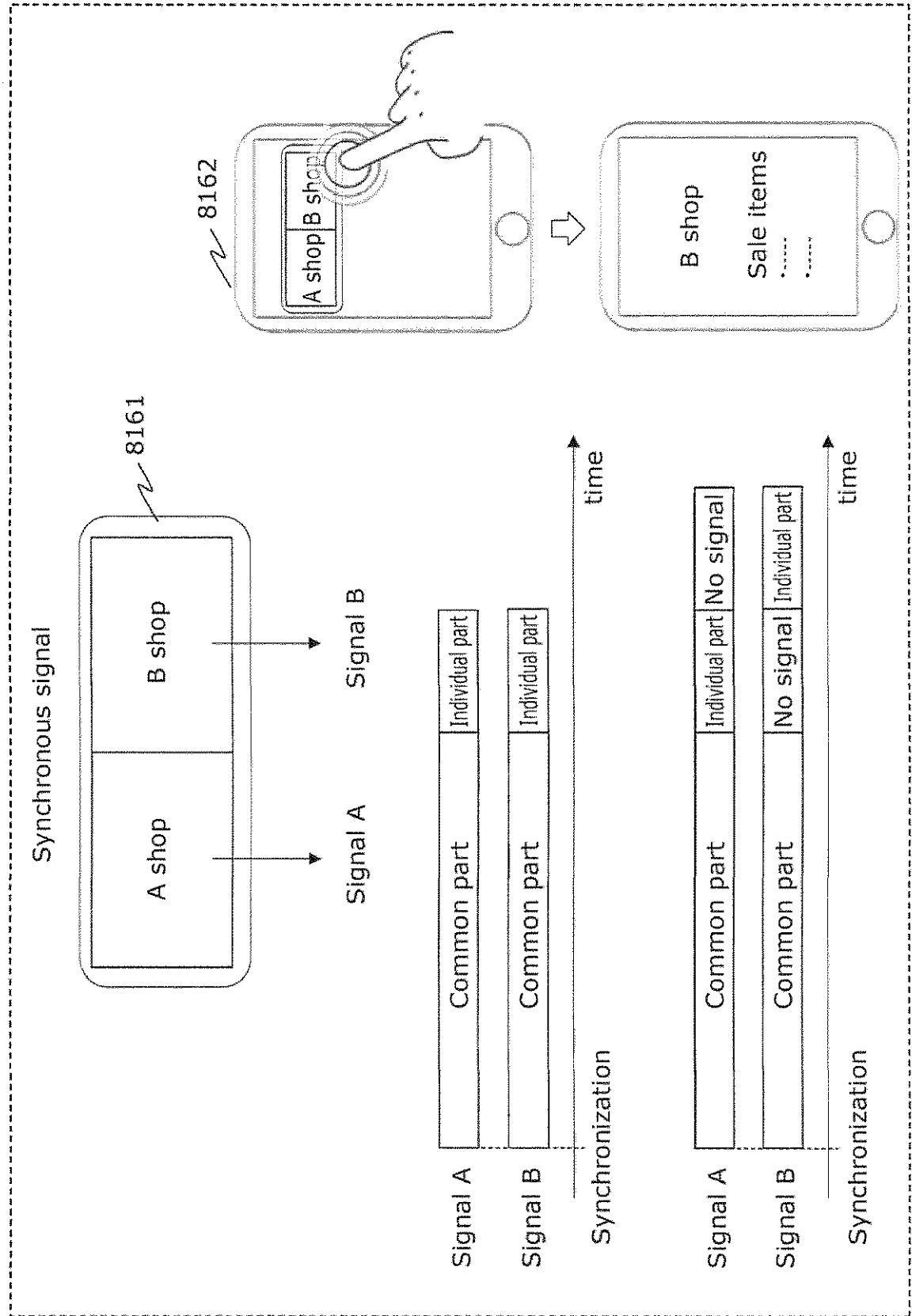


FIG. 186C

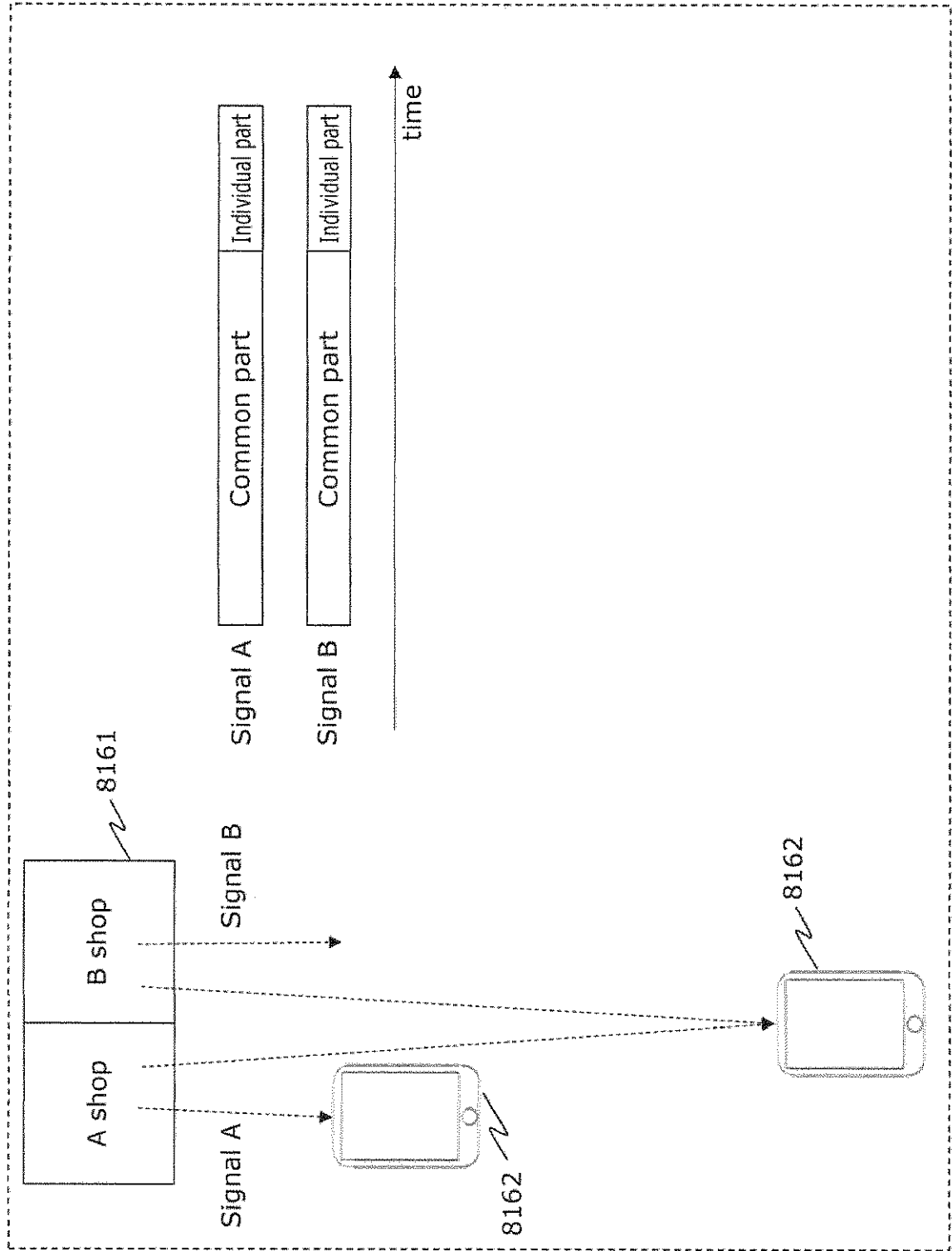


FIG. 187

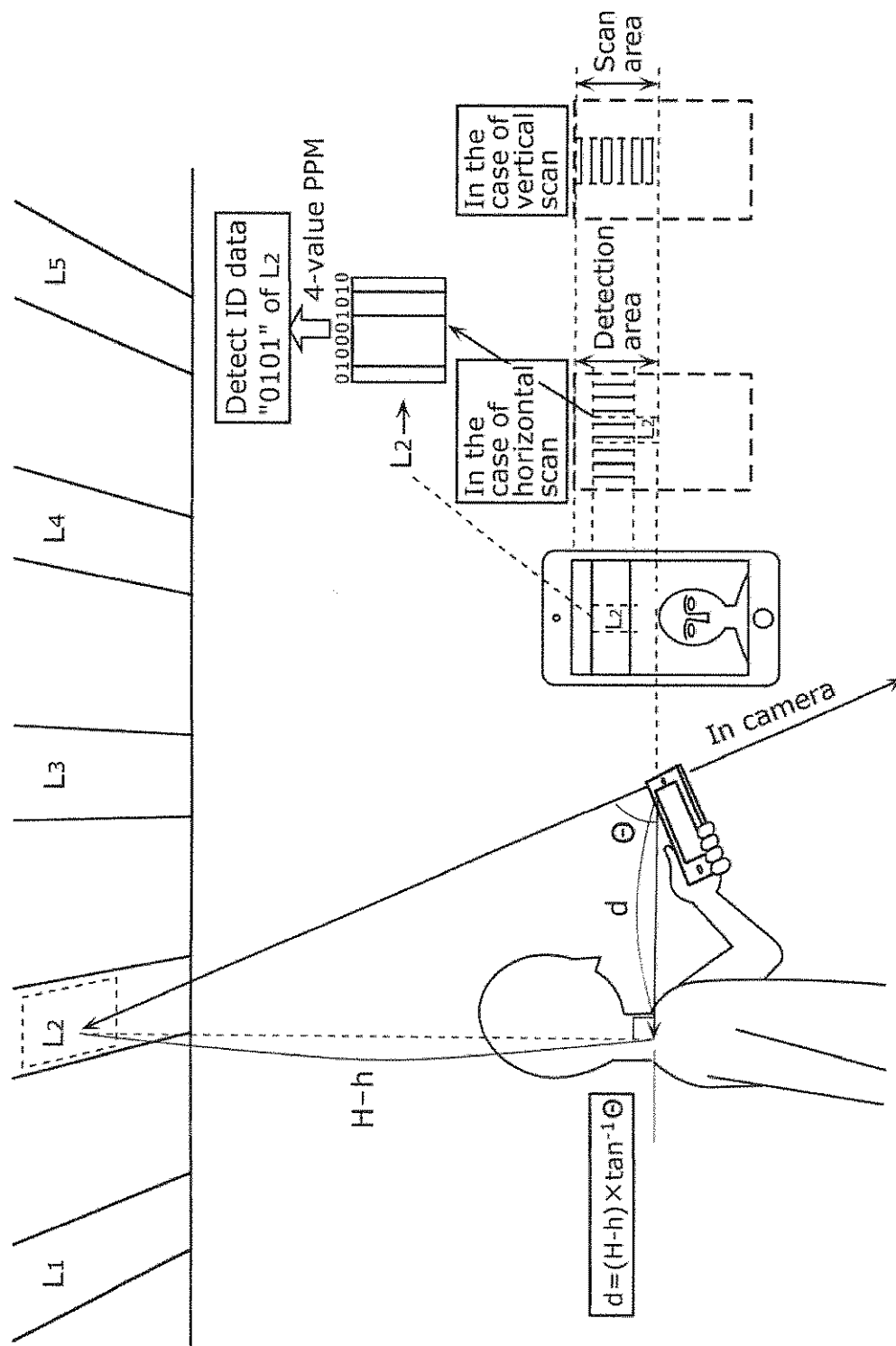


FIG. 188

L0: Transmission of common data: reference position information (latitude, longitude), ceiling height information, server URL, room shape information, difference information between ID number of each individual lighting and reference position information or relative position information or arrangement information of each ID, area-specific data broadcasting

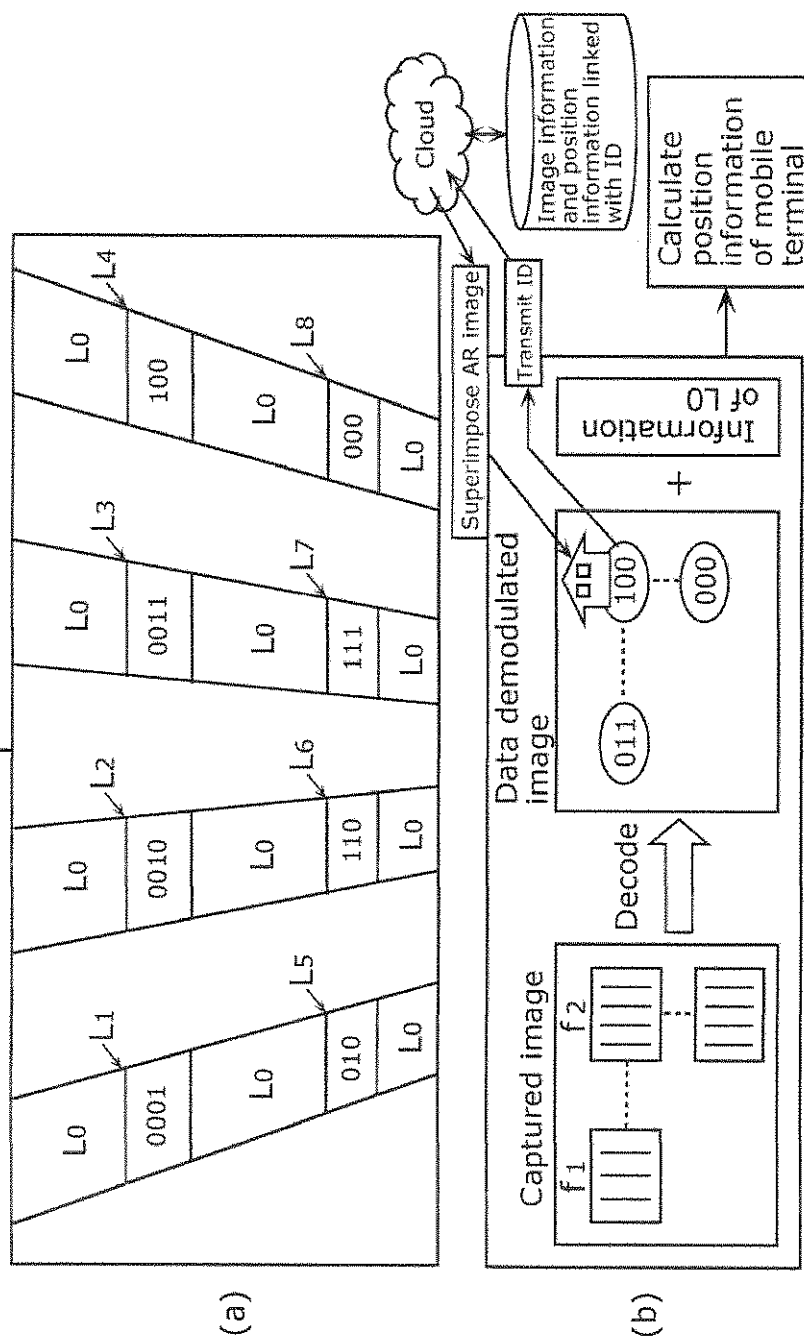


FIG. 189

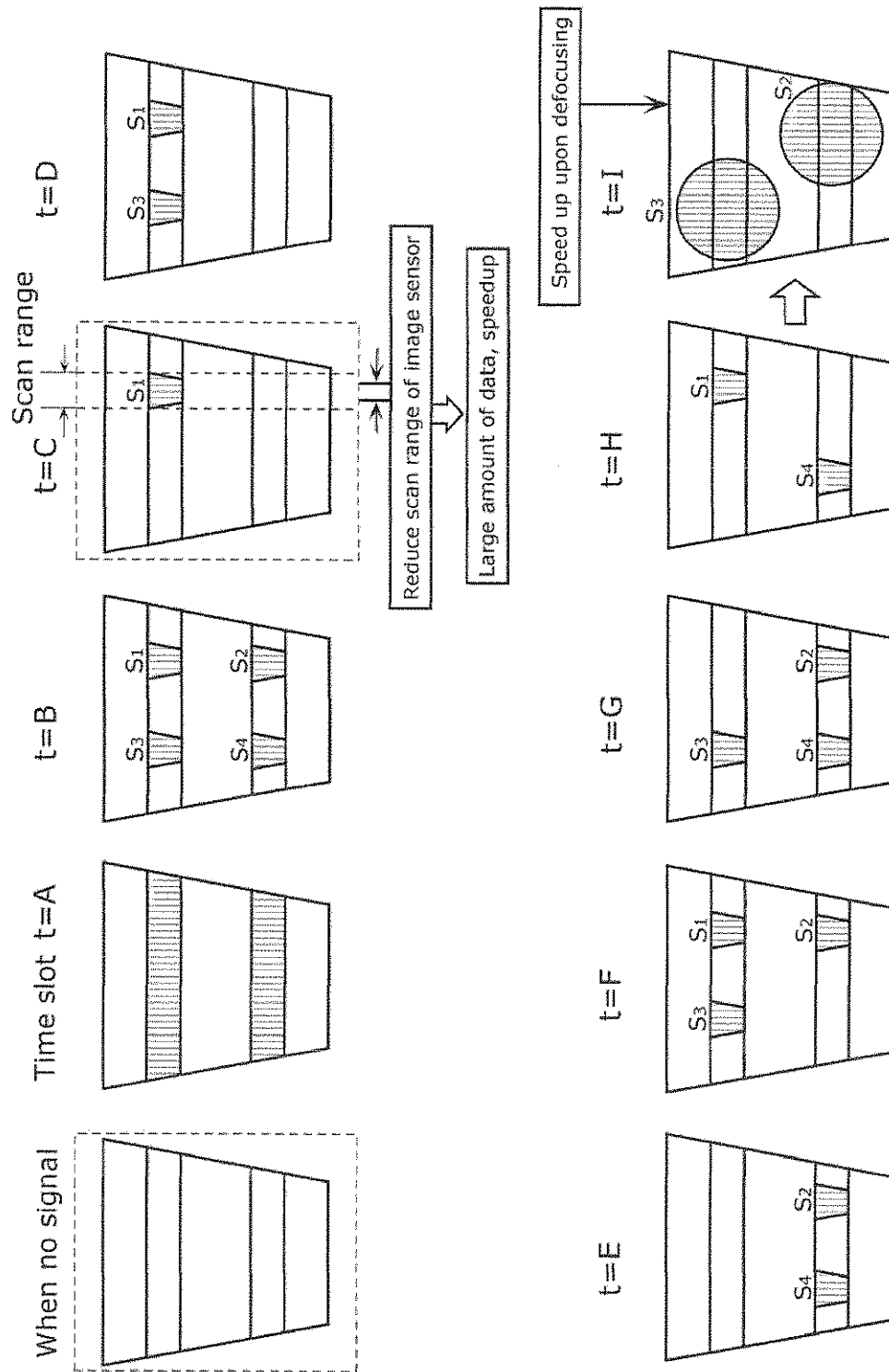
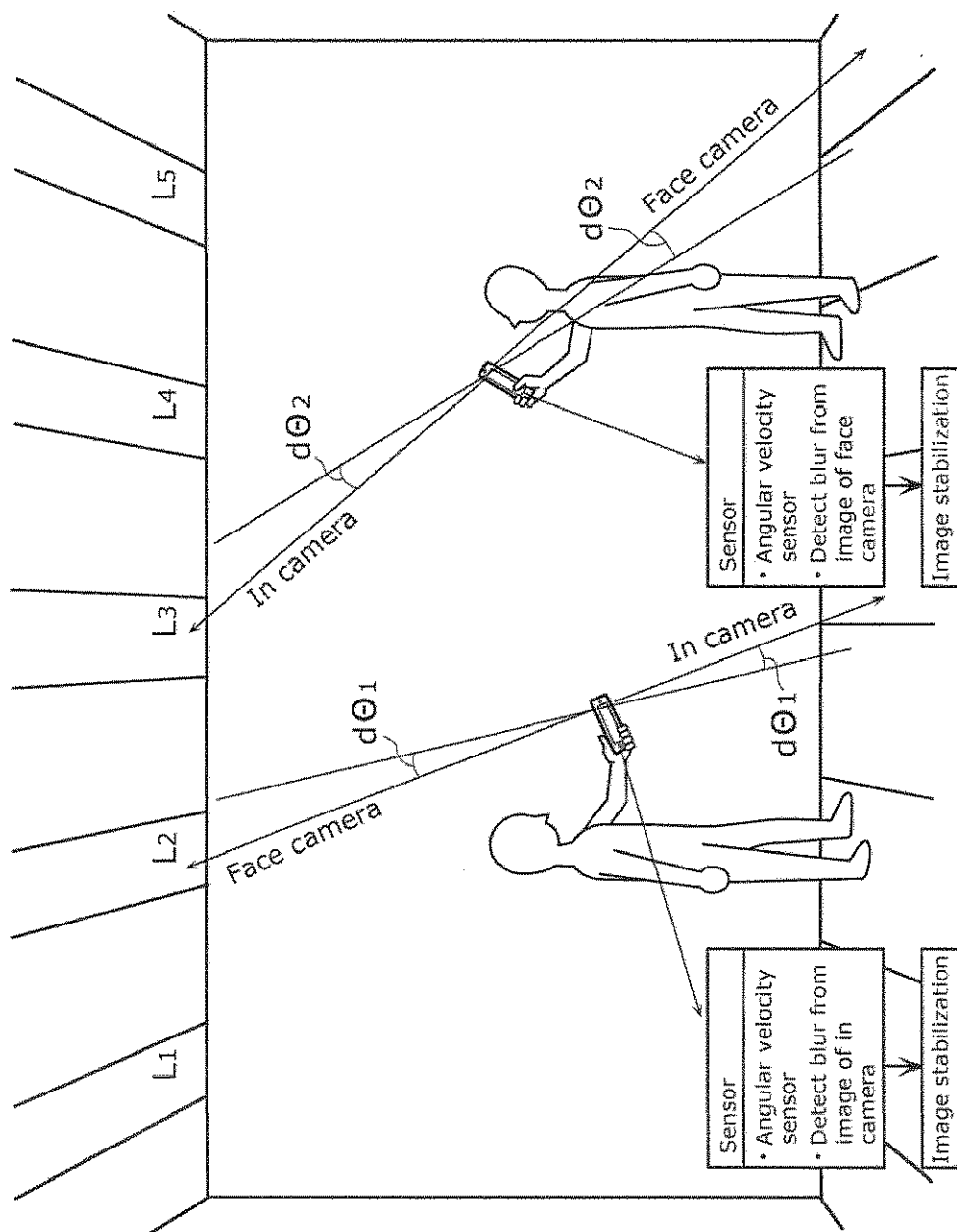


FIG. 190



[illegible]

FIG. 192

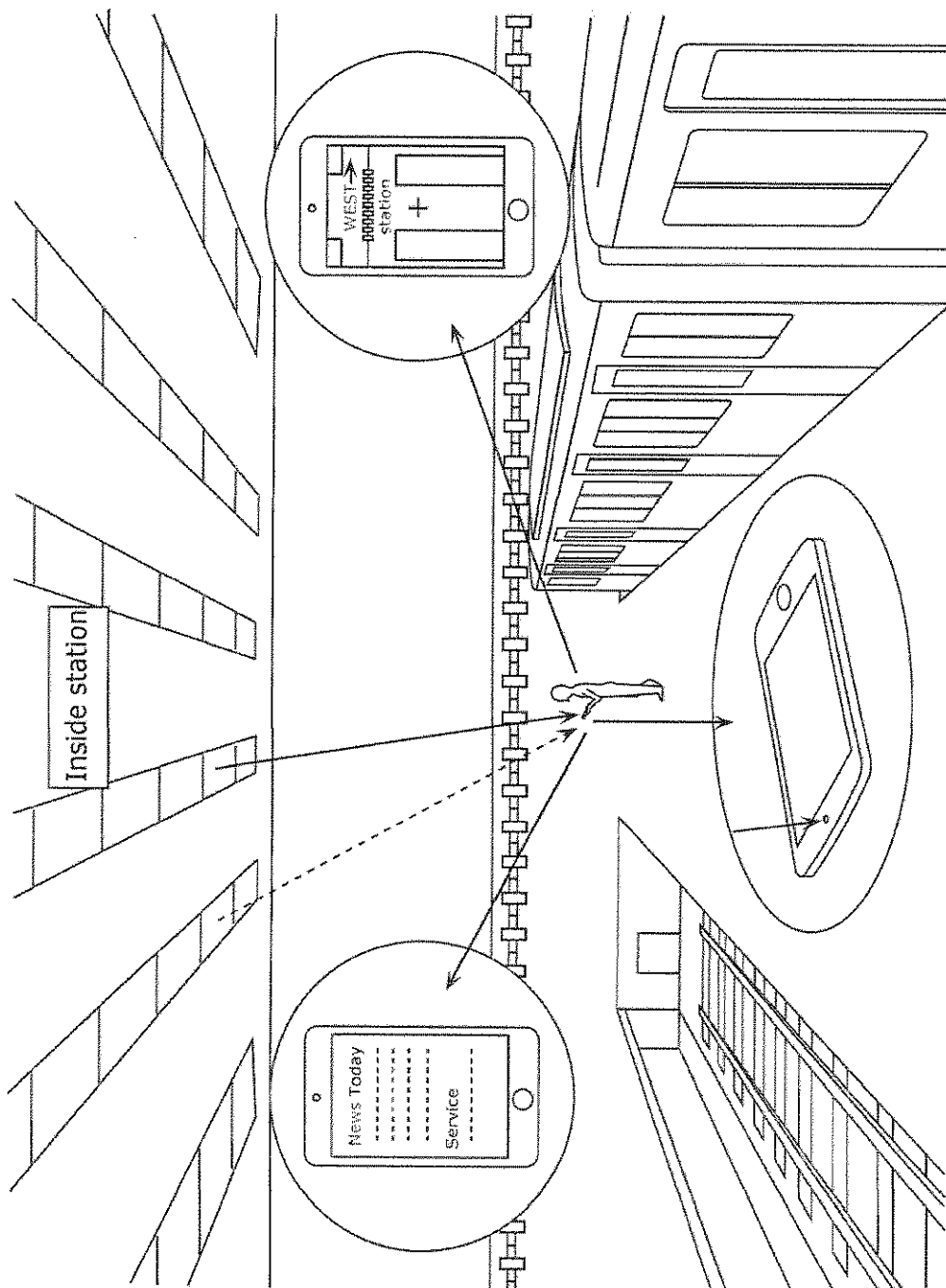


FIG. 193

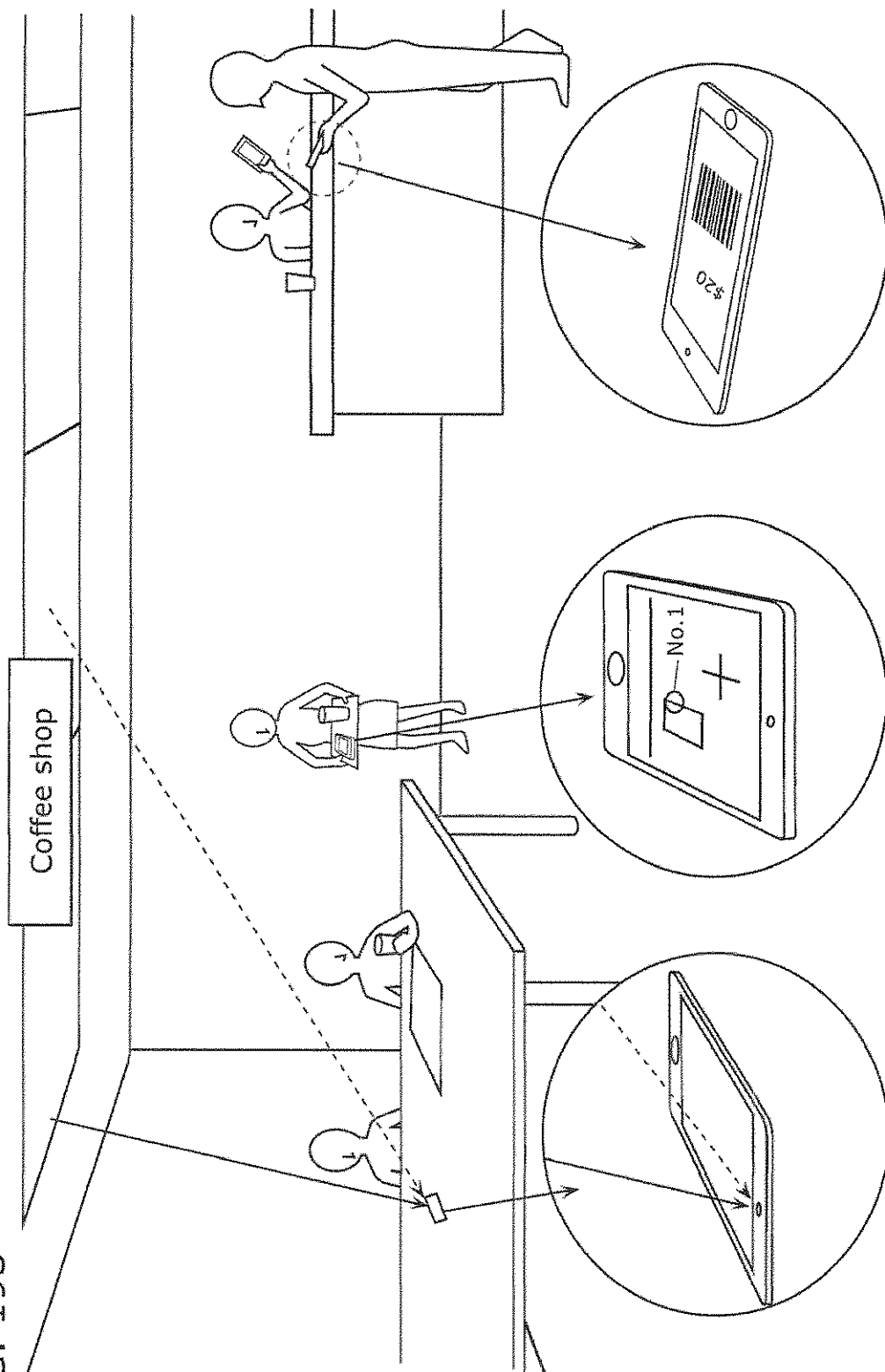


FIG. 194

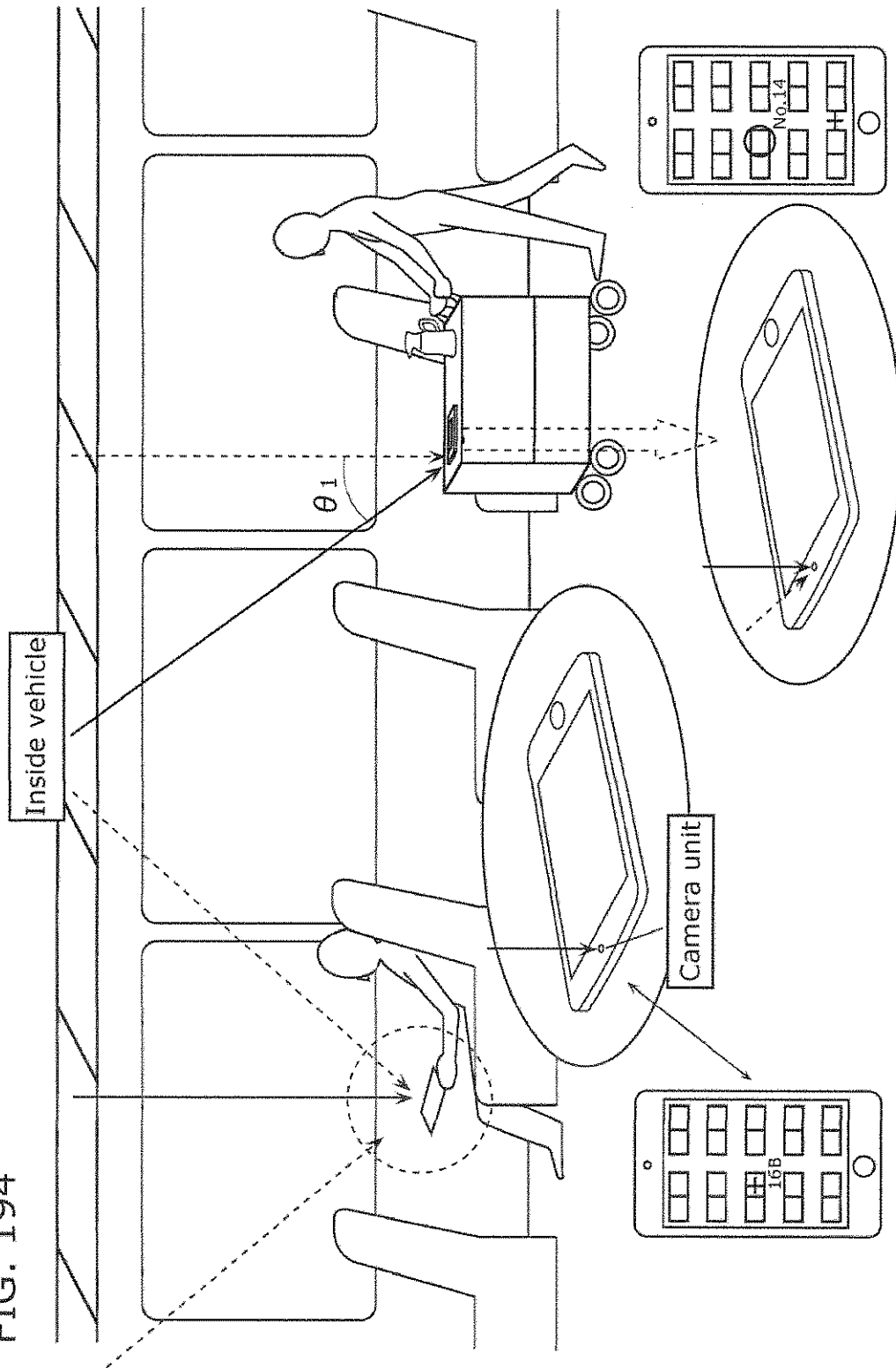


FIG. 195

In the case of 1bit per symbol

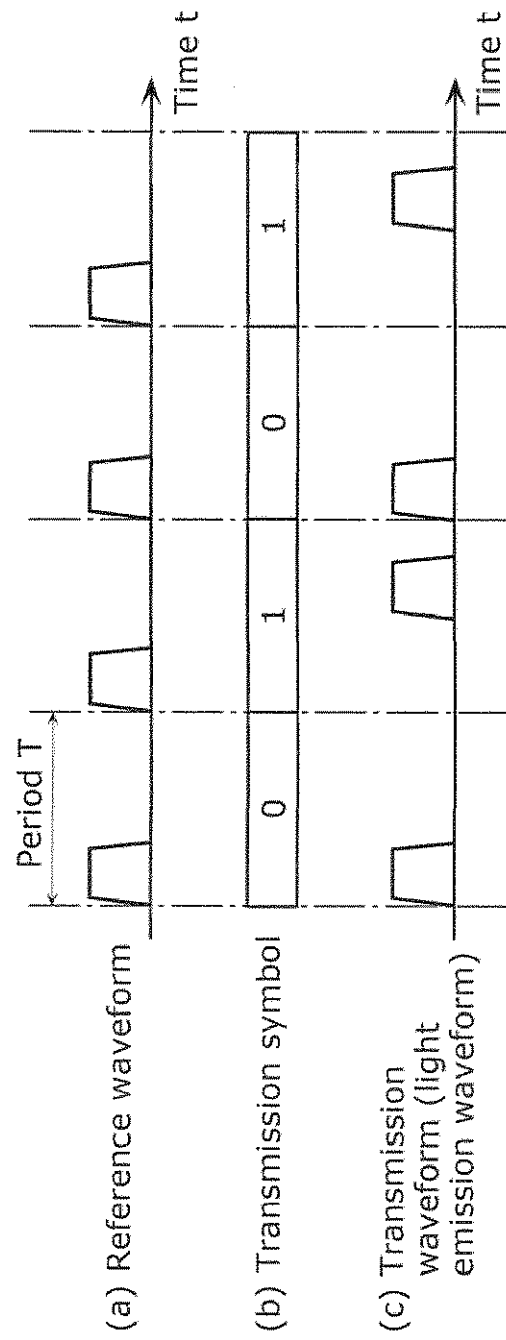


FIG. 196

In the case of symbol $0 \rightarrow 0$

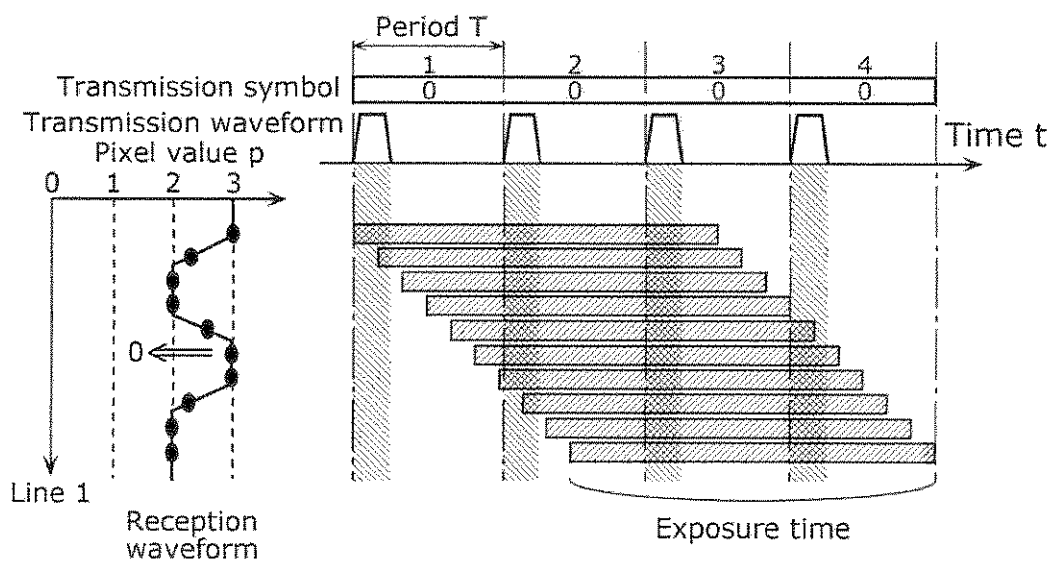


FIG. 197

In the case of symbol 0 $\rightarrow$ 1

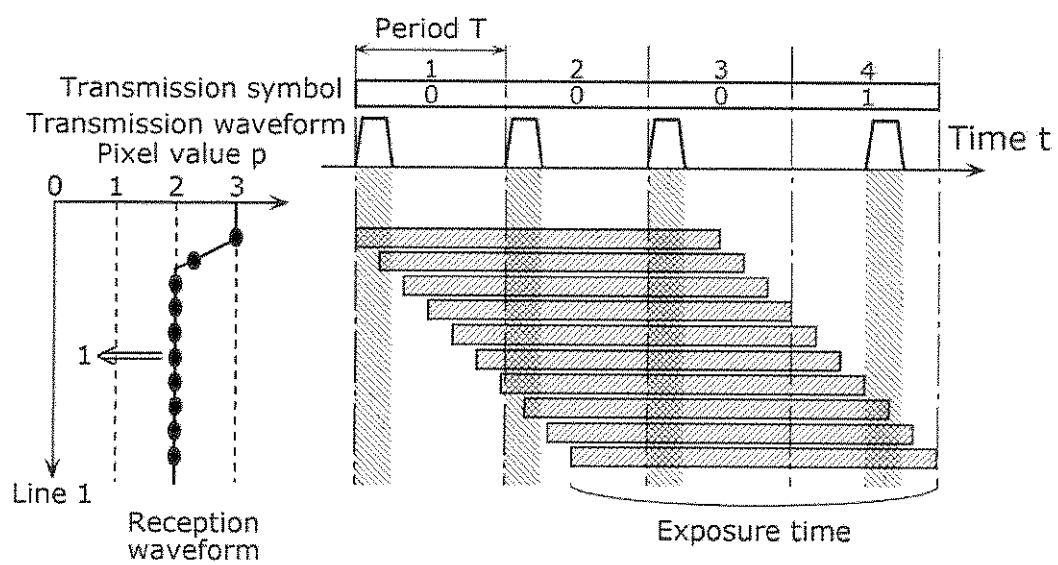


FIG. 198

In the case of symbol 1 $\rightarrow$ 0

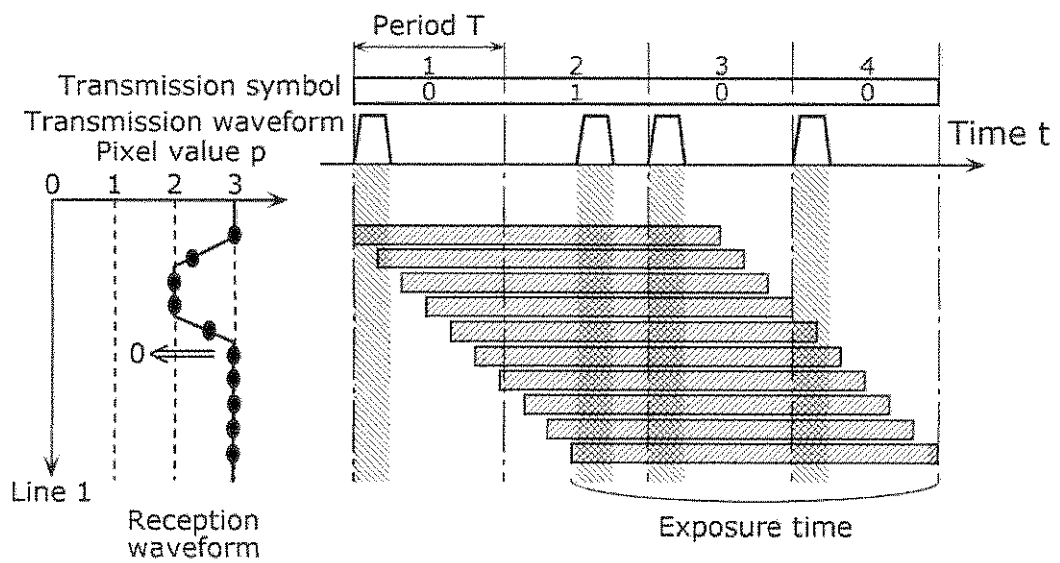


FIG. 199

In the case of symbol 1 $\rightarrow$ 1

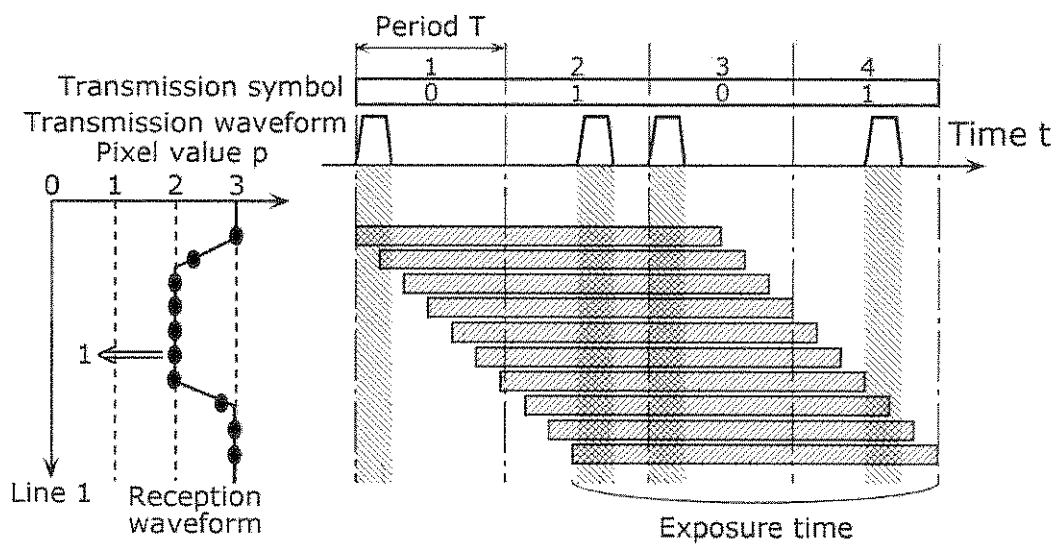


FIG. 200

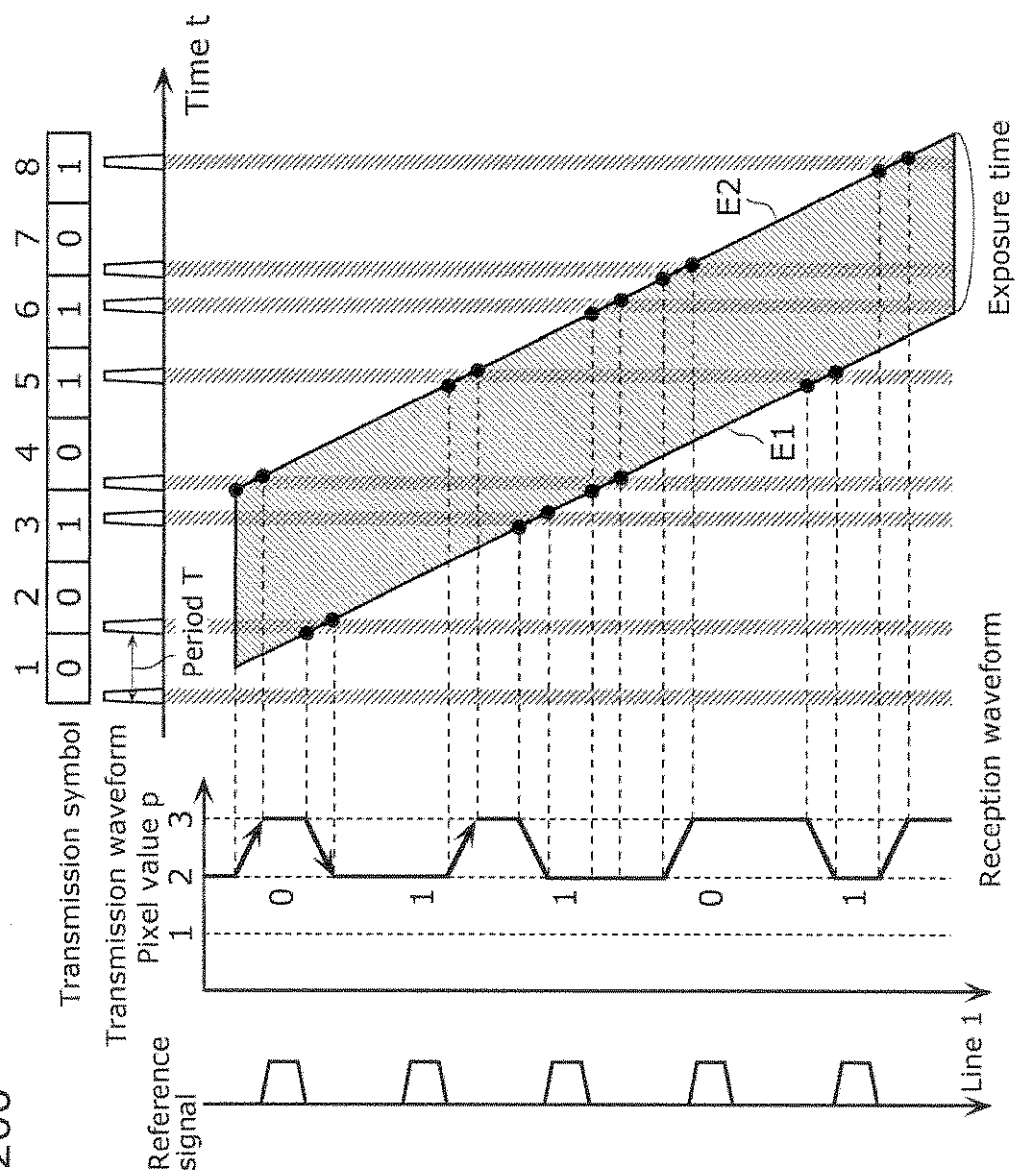


FIG. 201

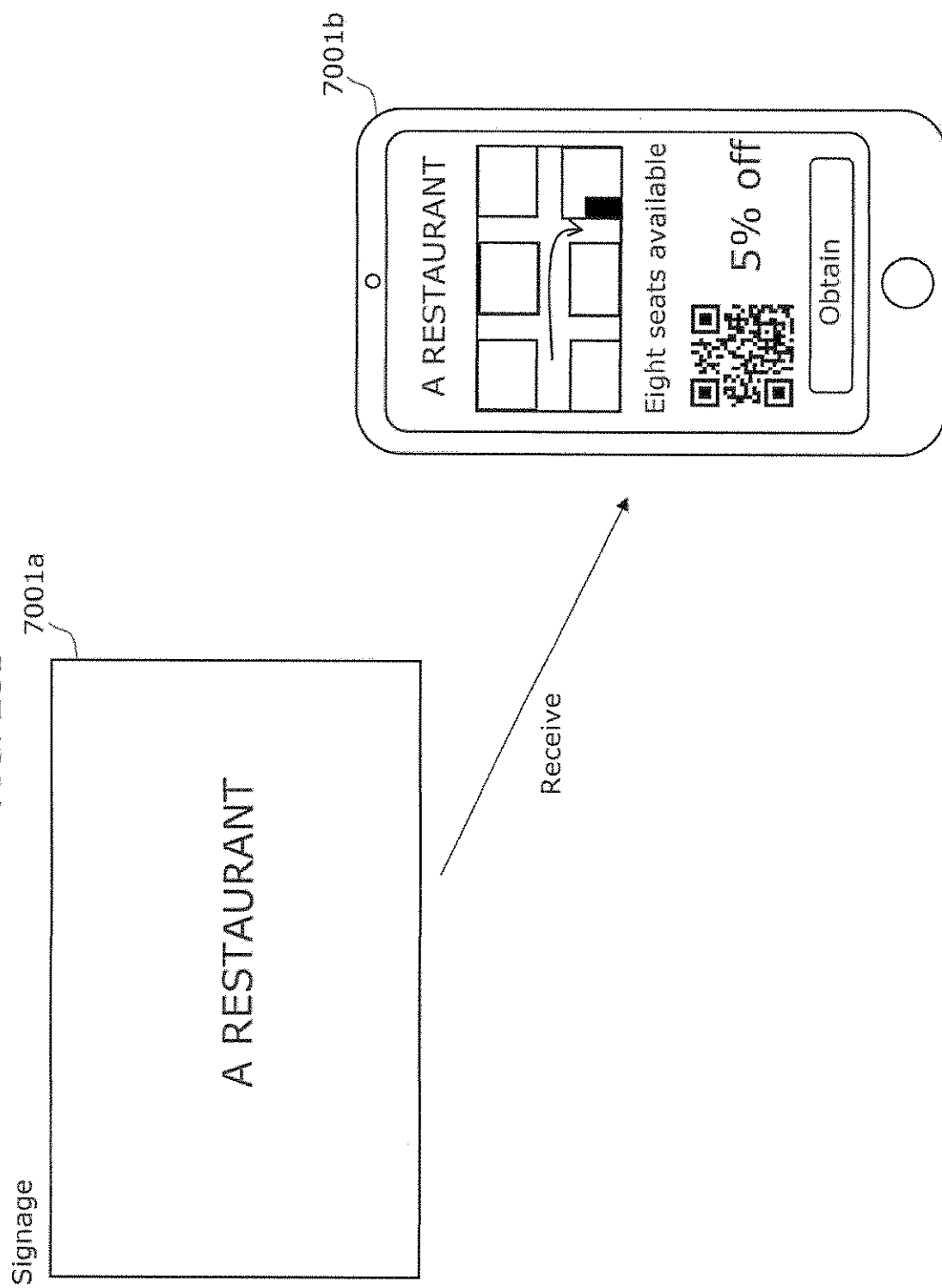


FIG. 202

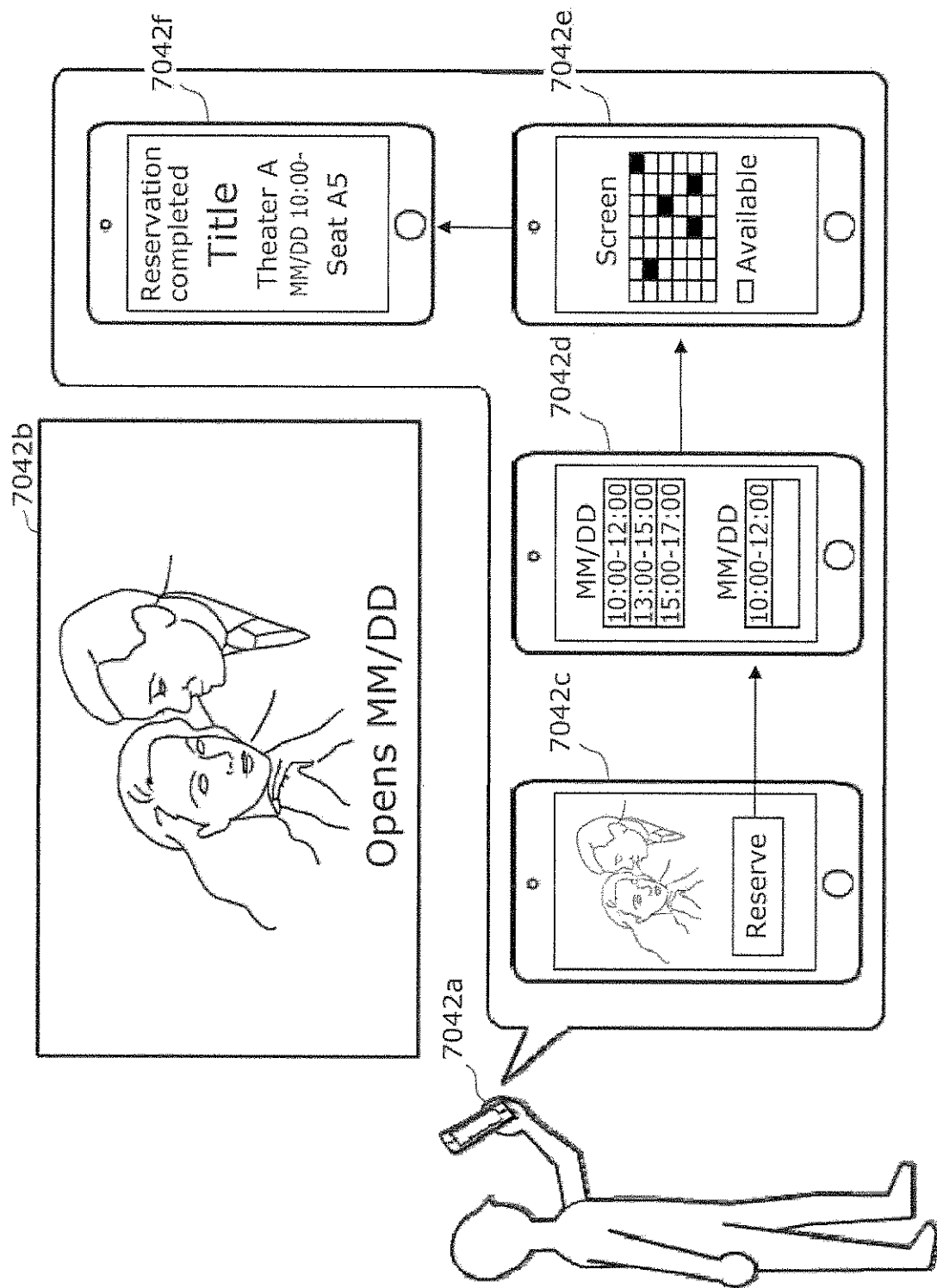


FIG. 203

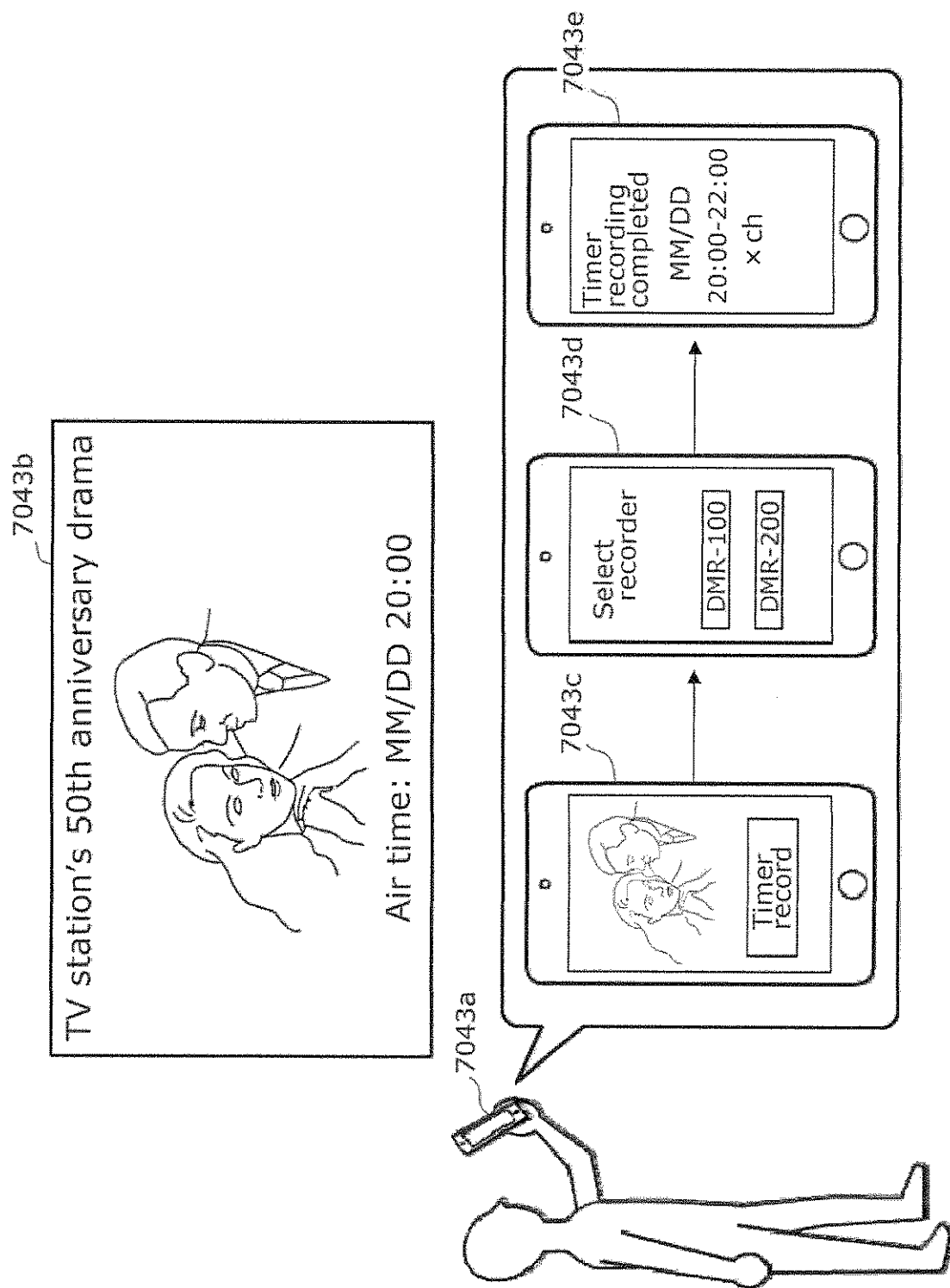


FIG. 204

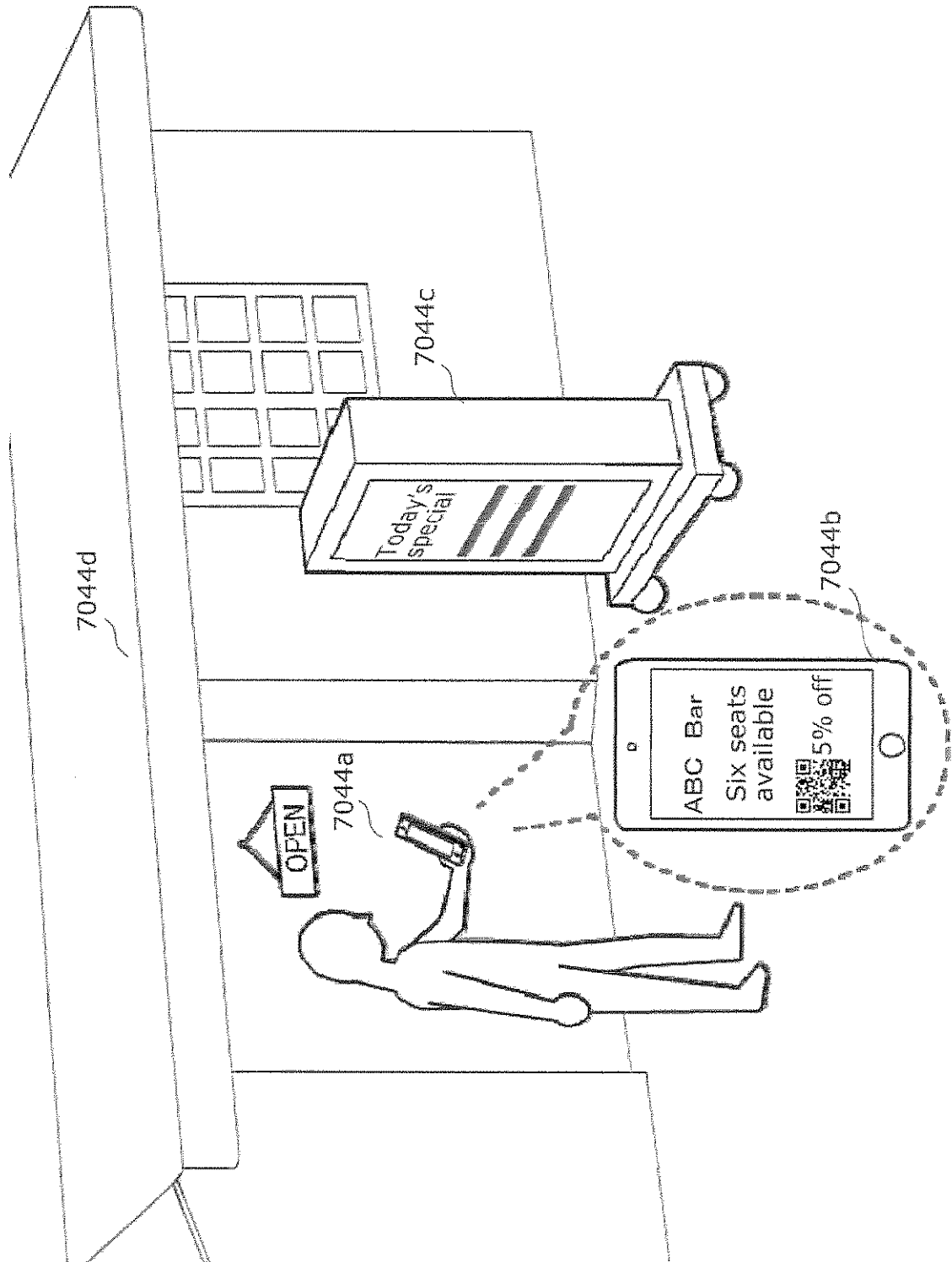


FIG. 205

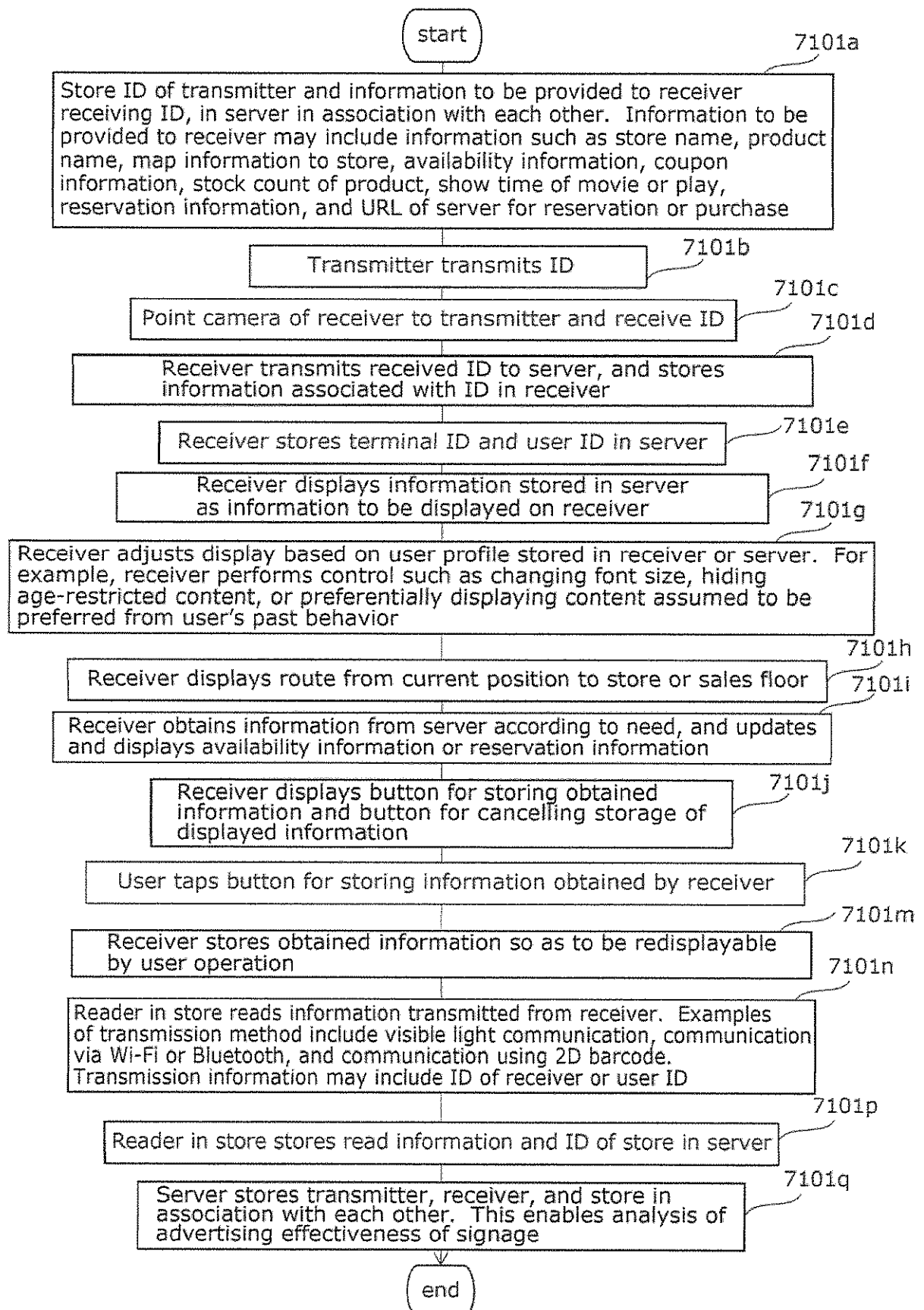


FIG. 206

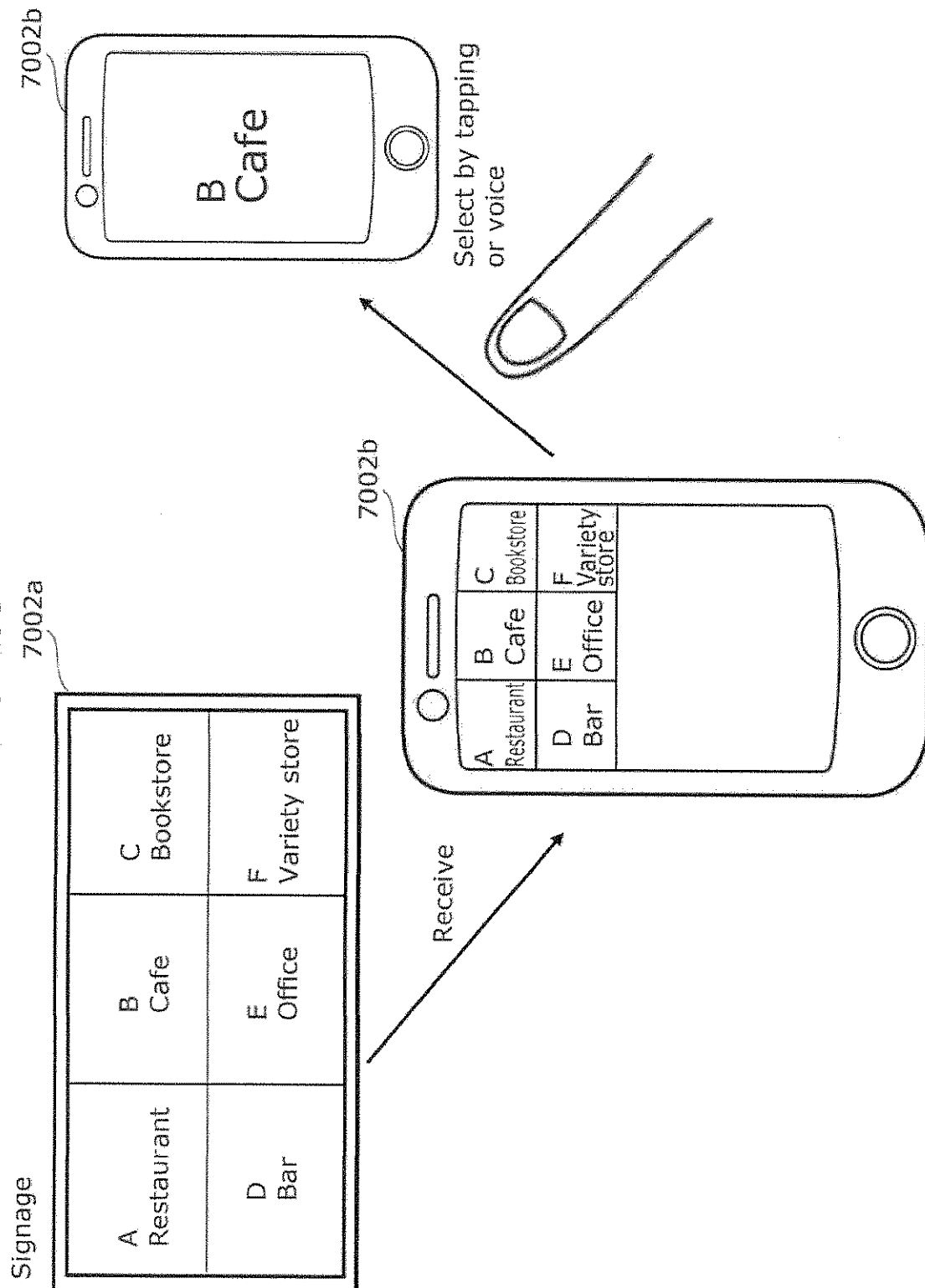


FIG. 207

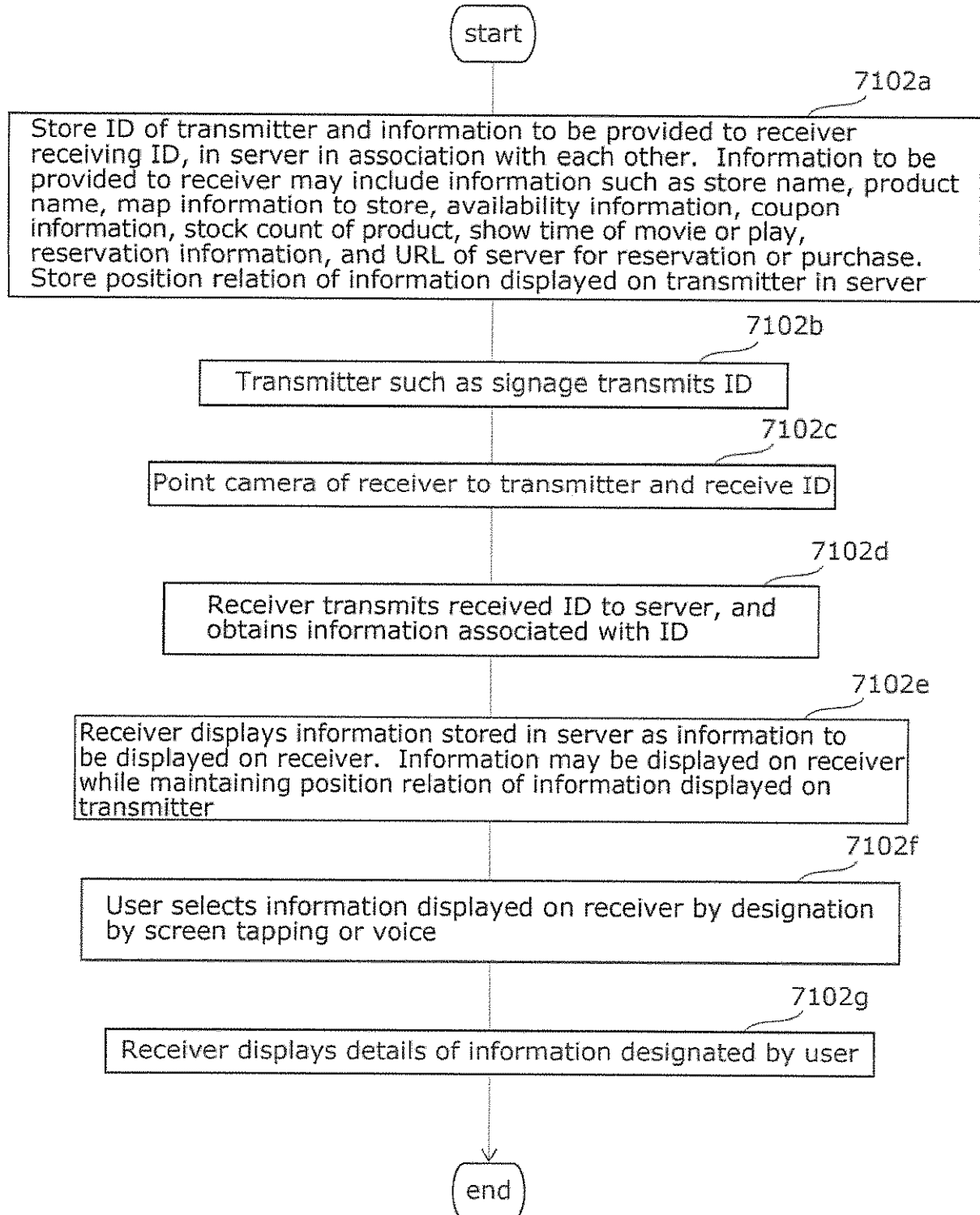


FIG. 208

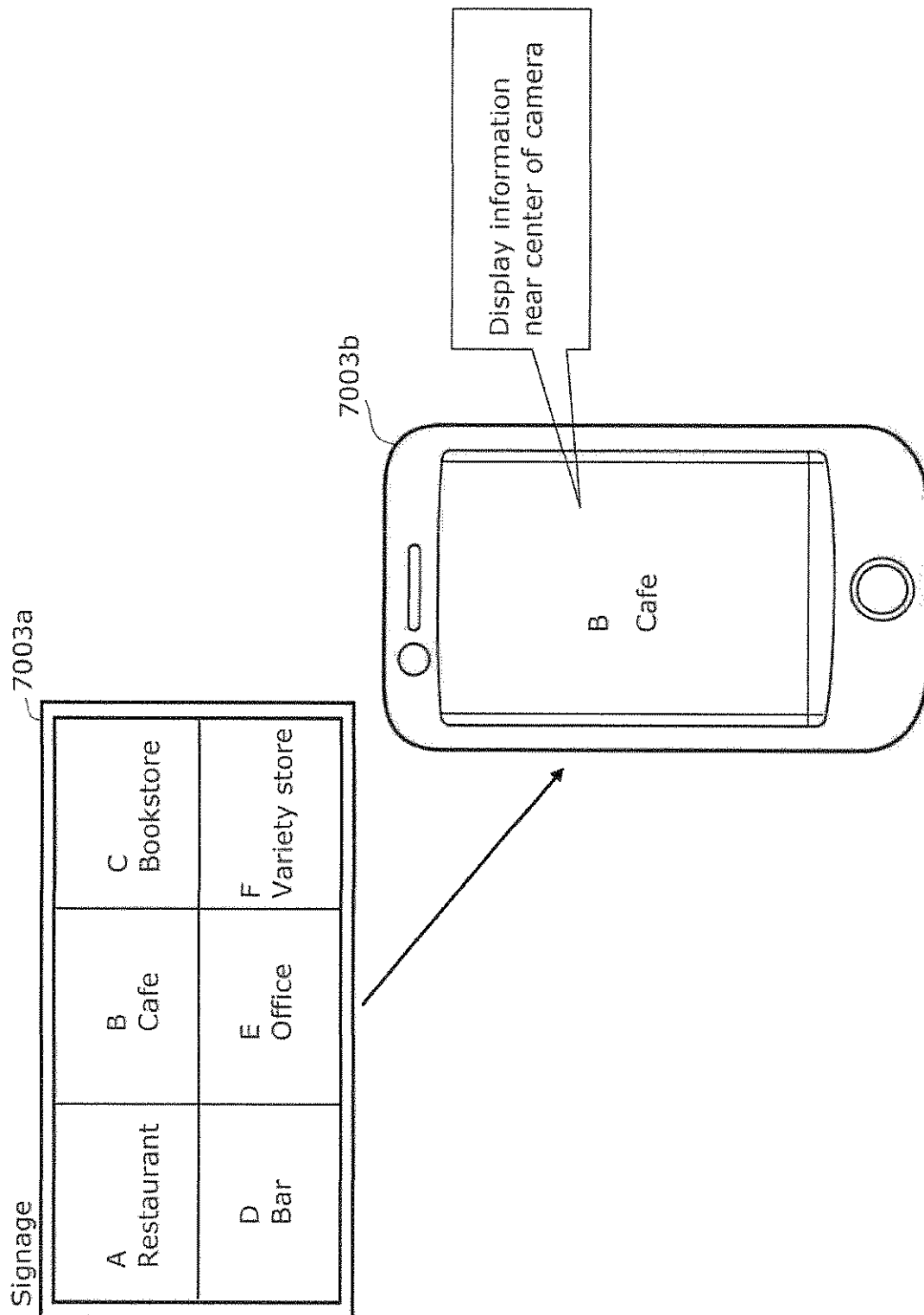


FIG. 209

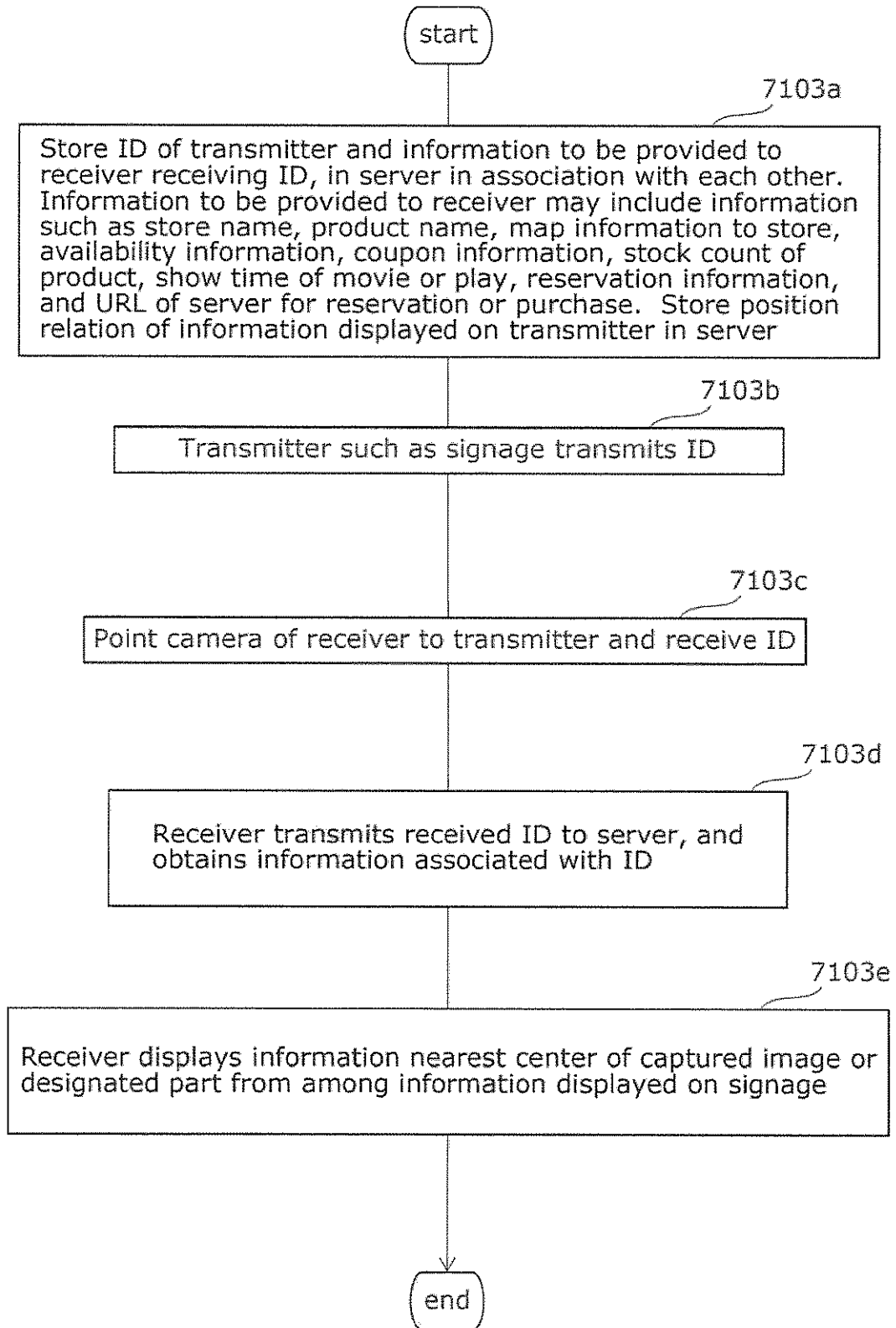


FIG. 210

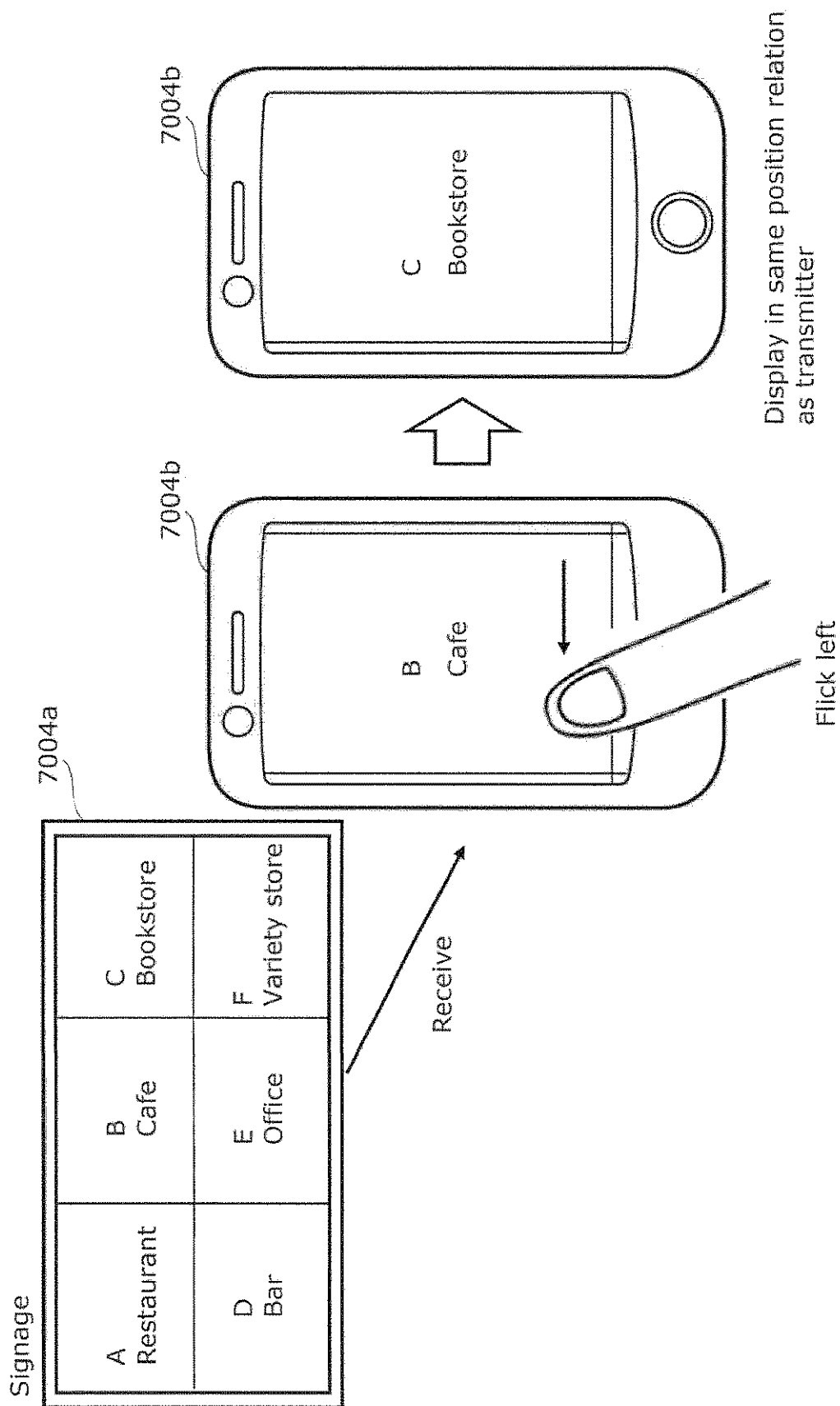


FIG. 211

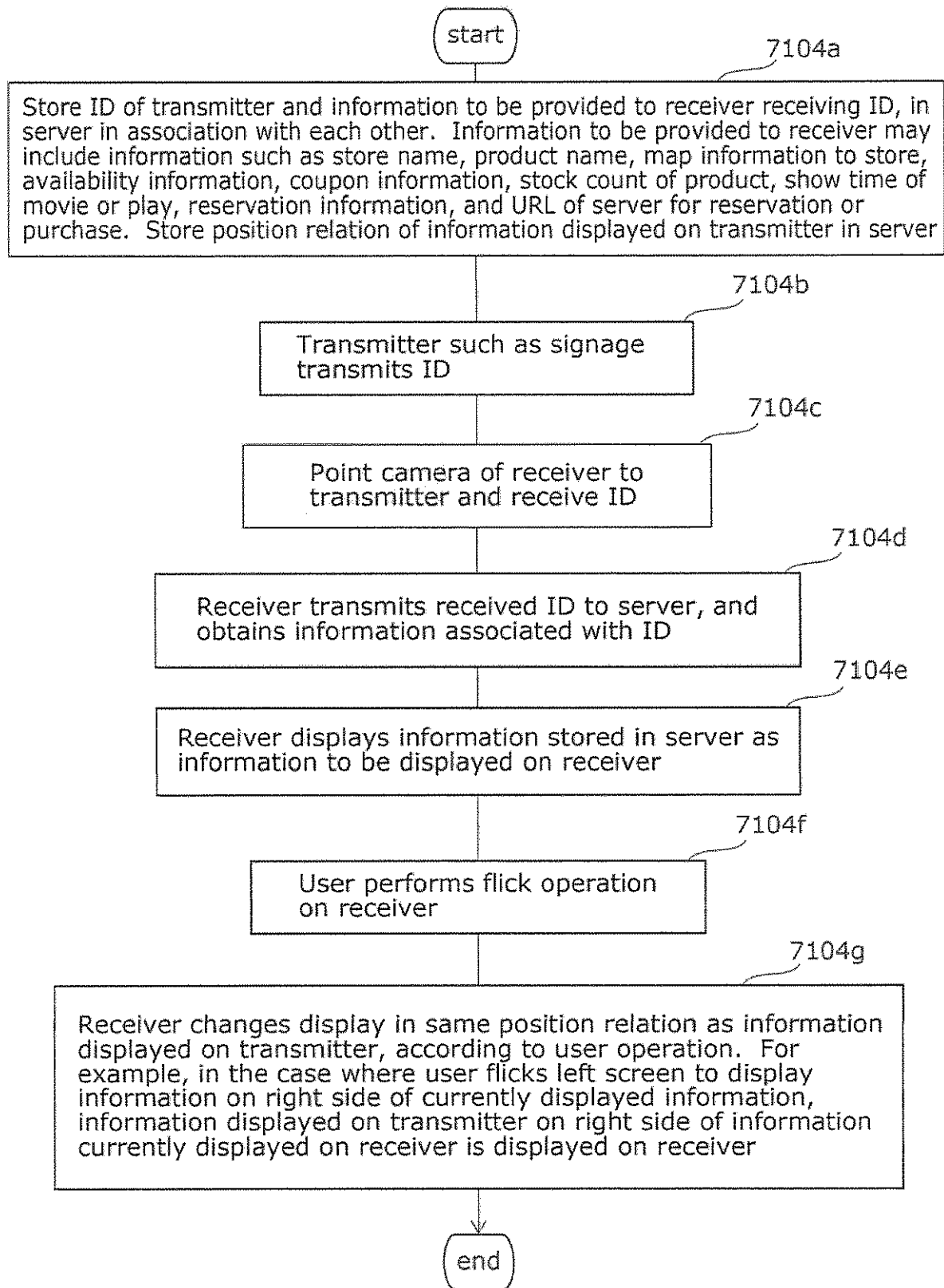


FIG. 212

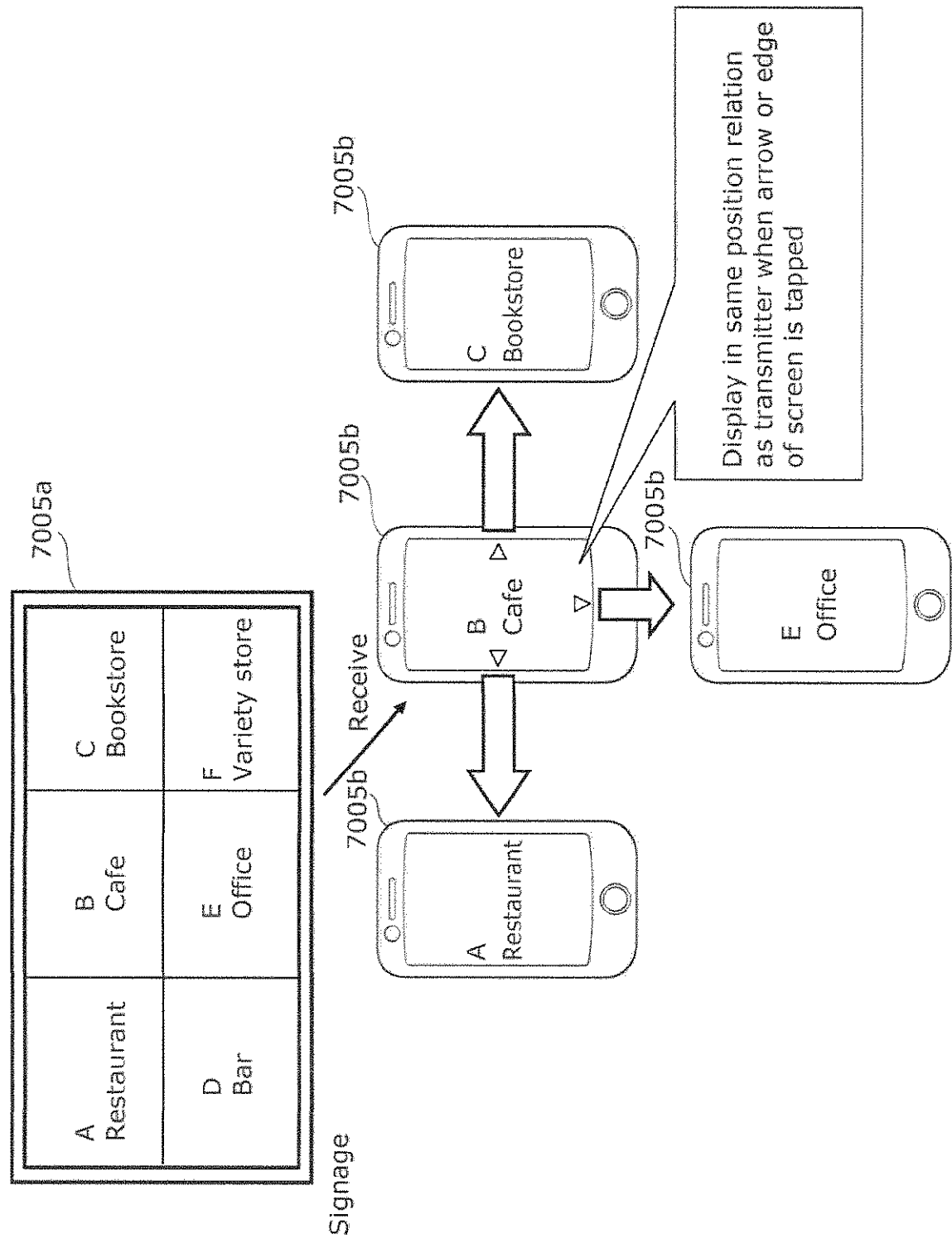


FIG. 213

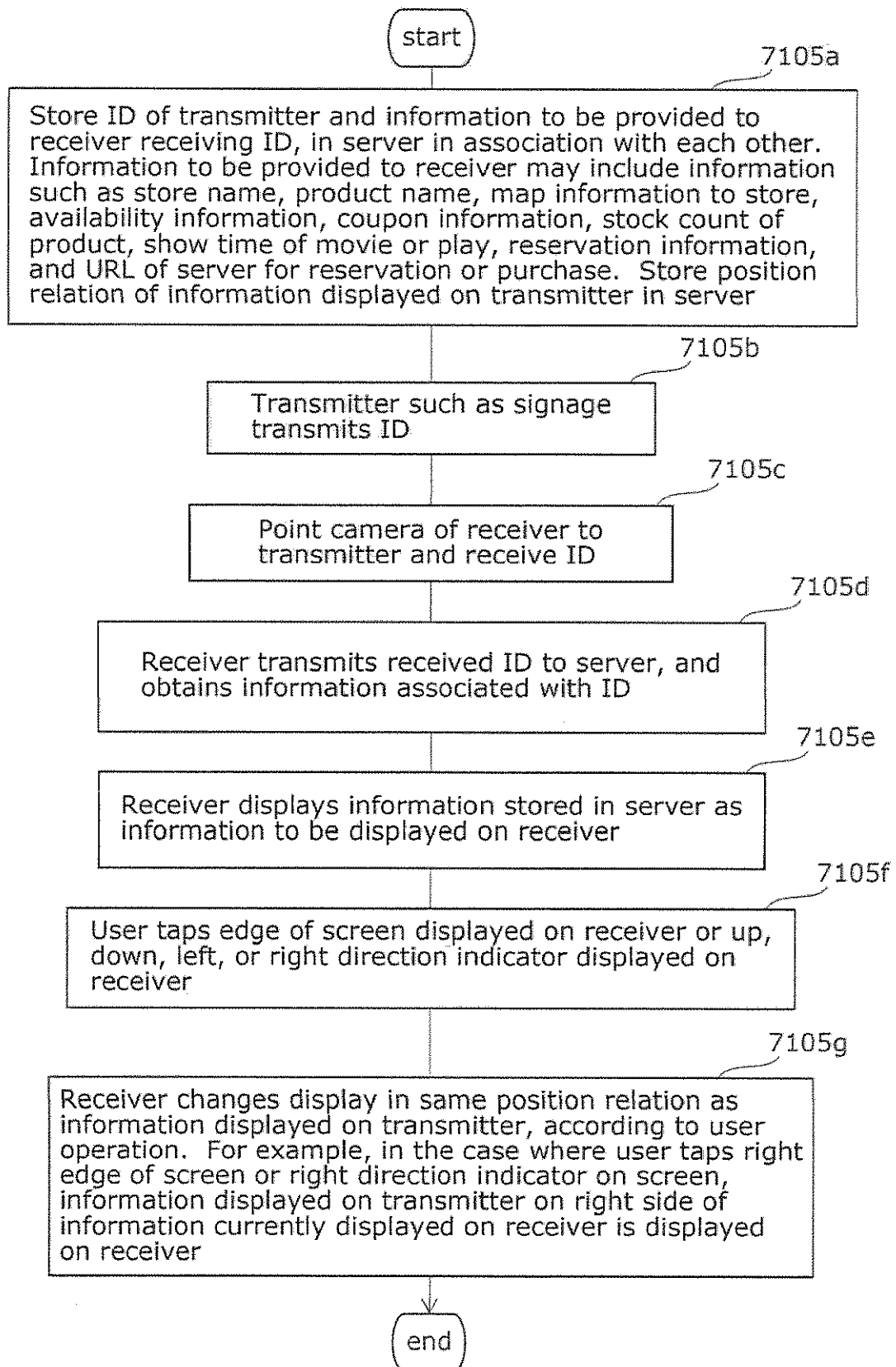


FIG. 214

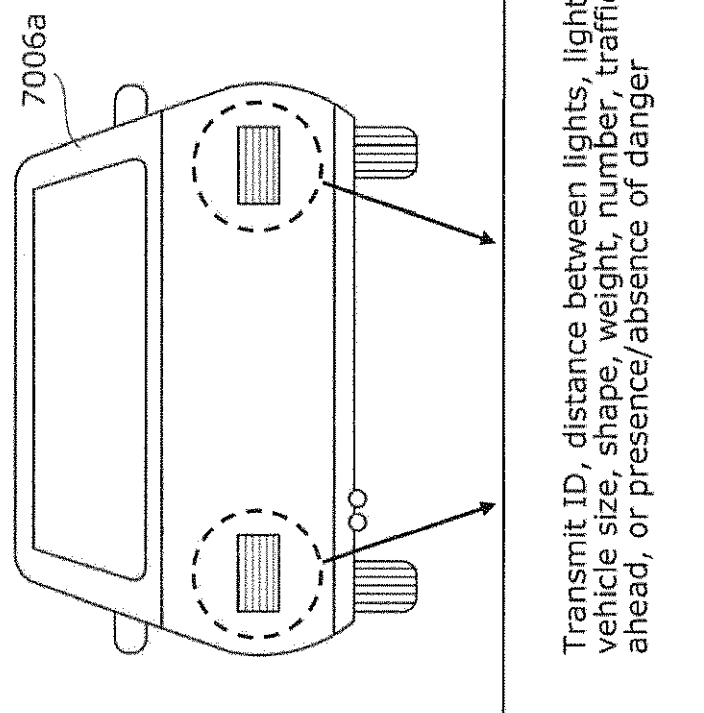


FIG. 215

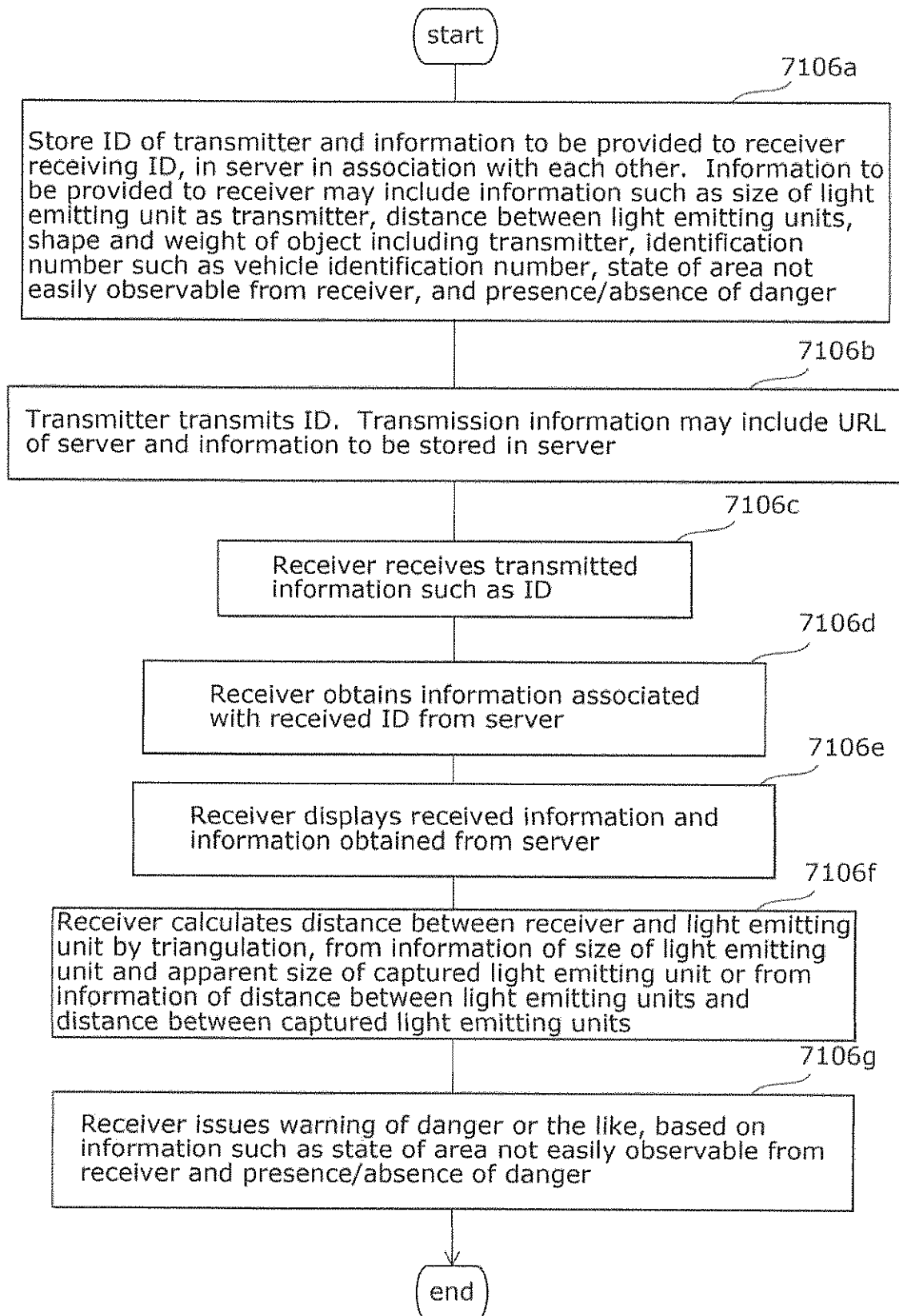


FIG. 216

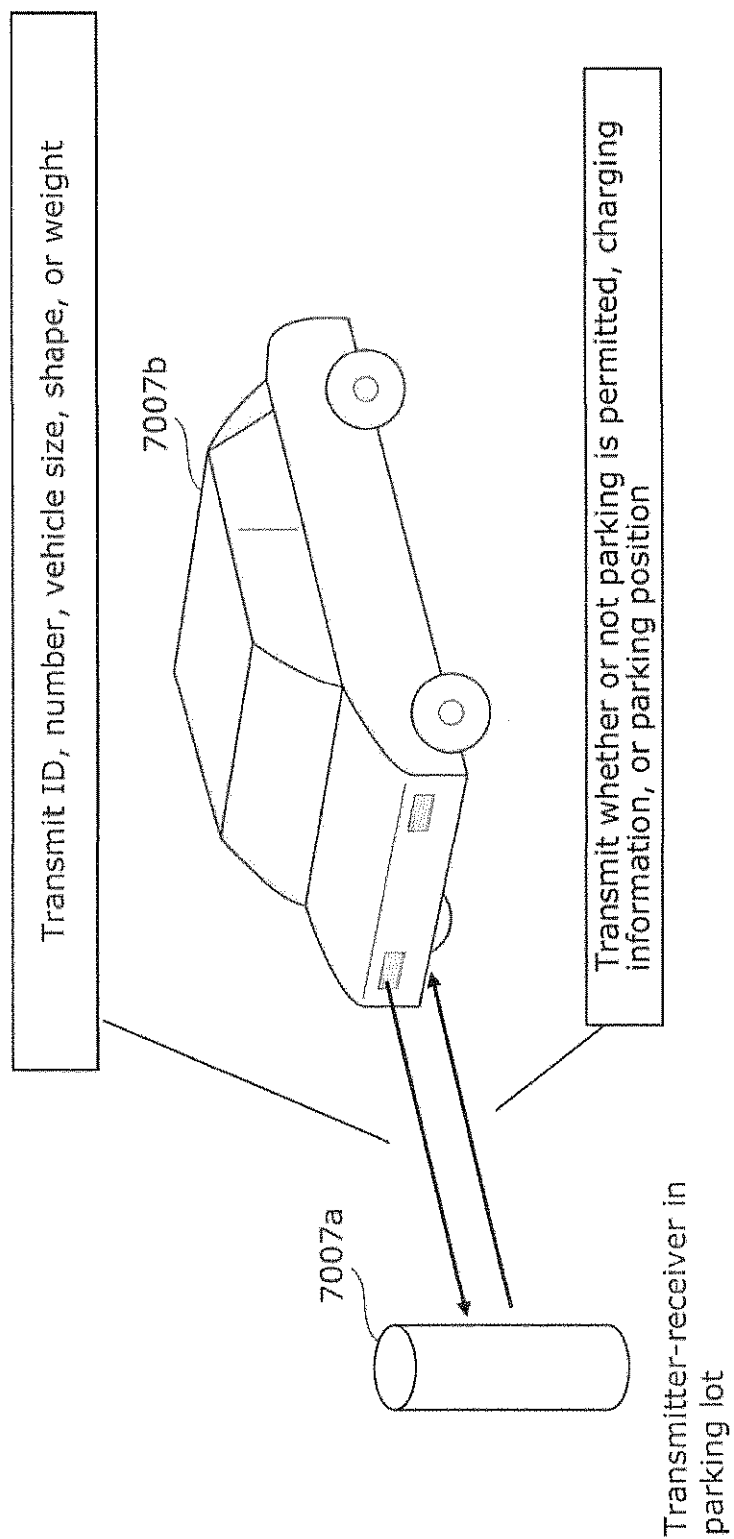


FIG. 217

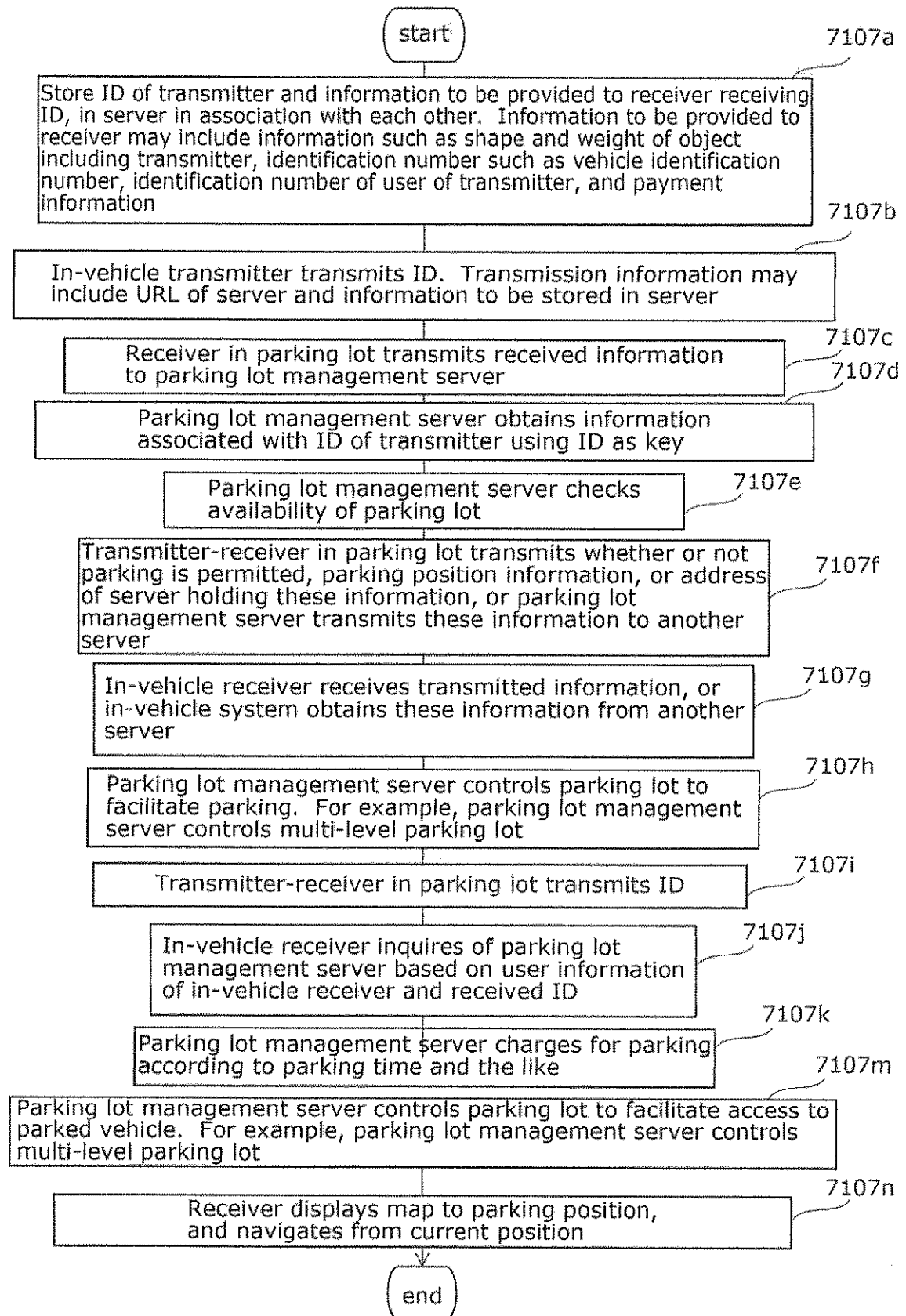


FIG. 218

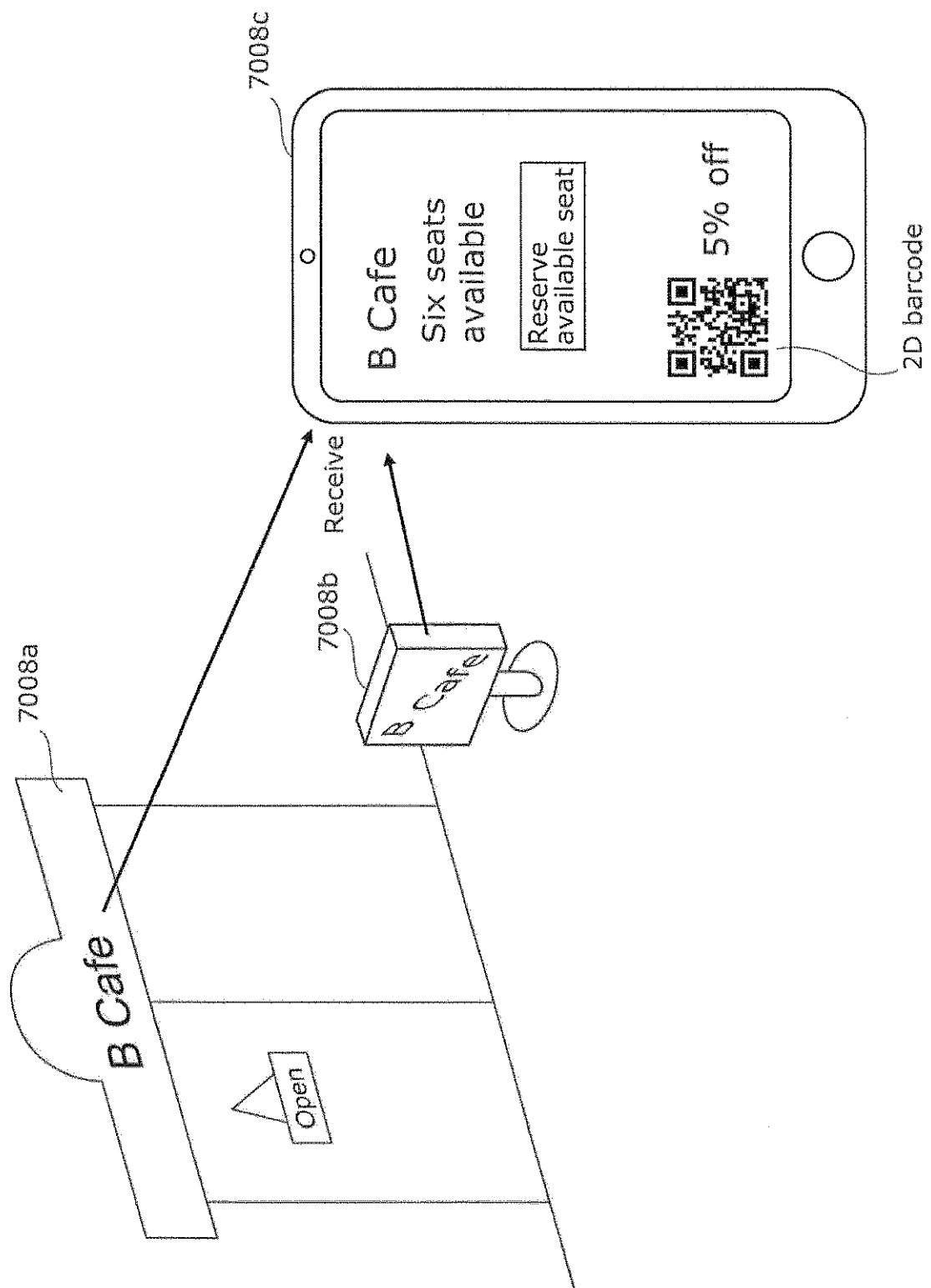


FIG. 219

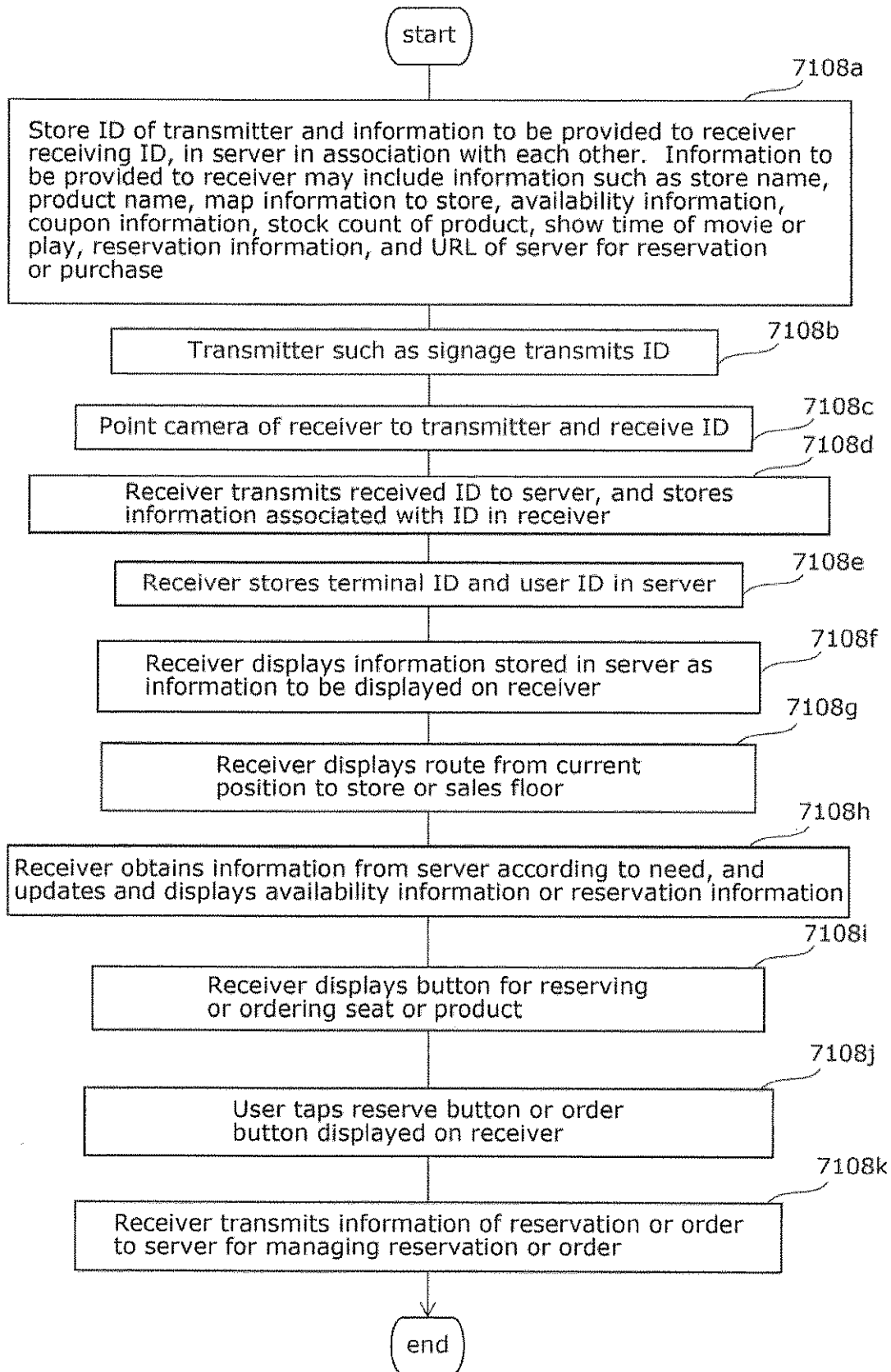


FIG. 220

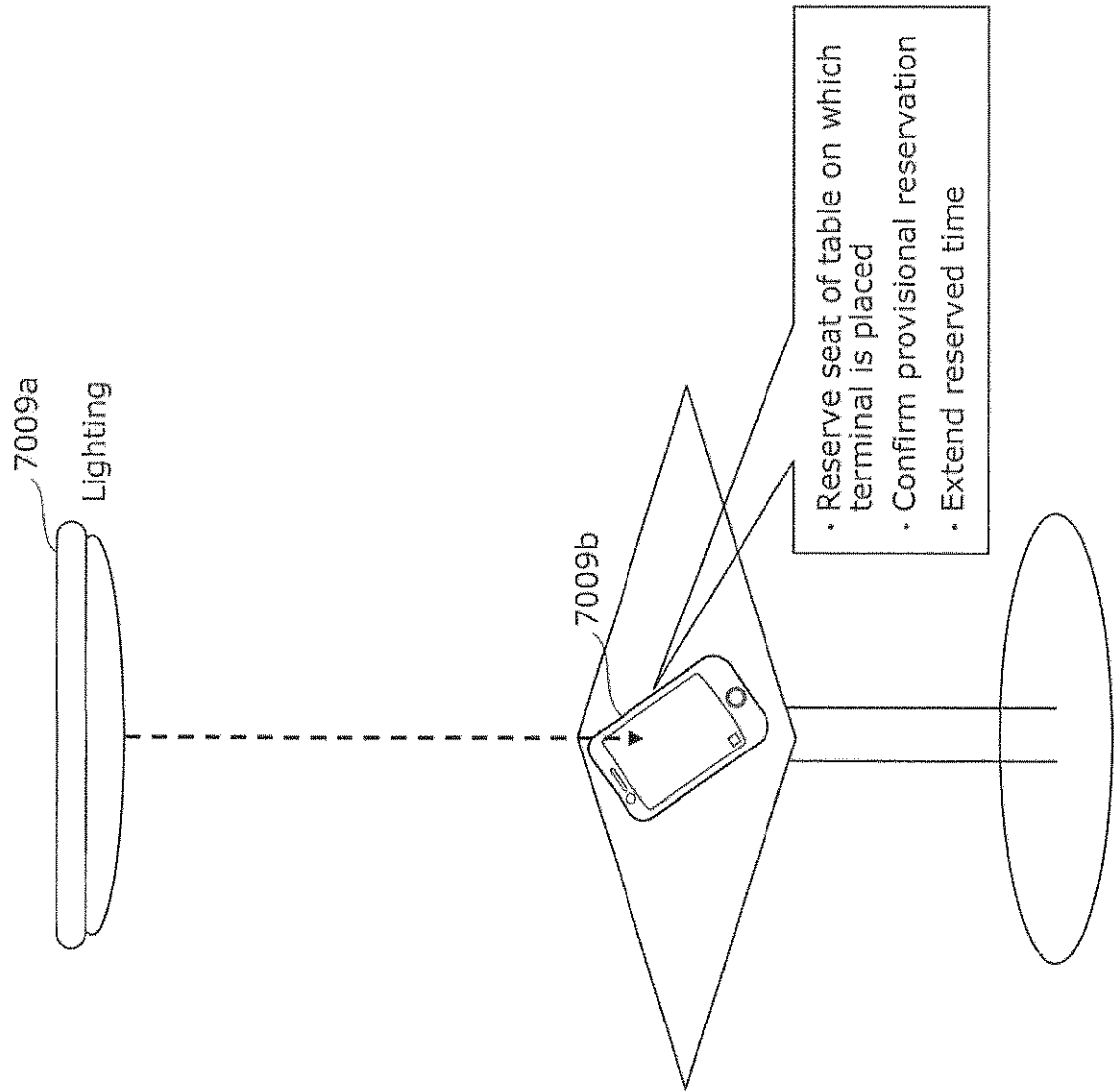


FIG. 221

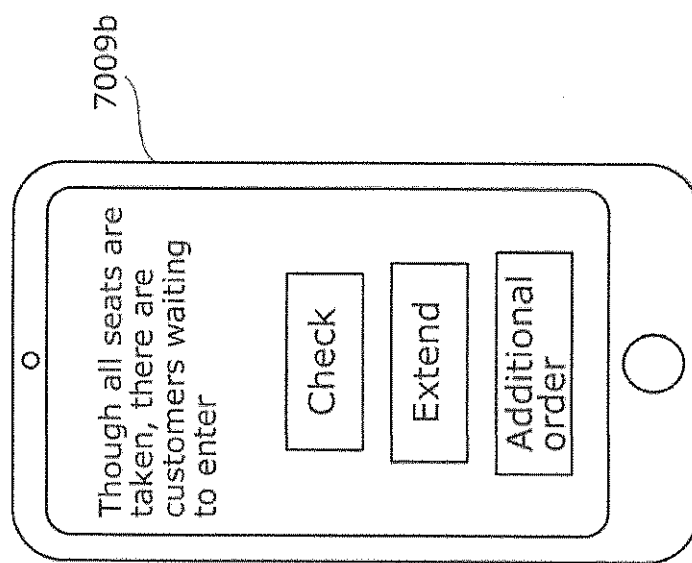


FIG. 222

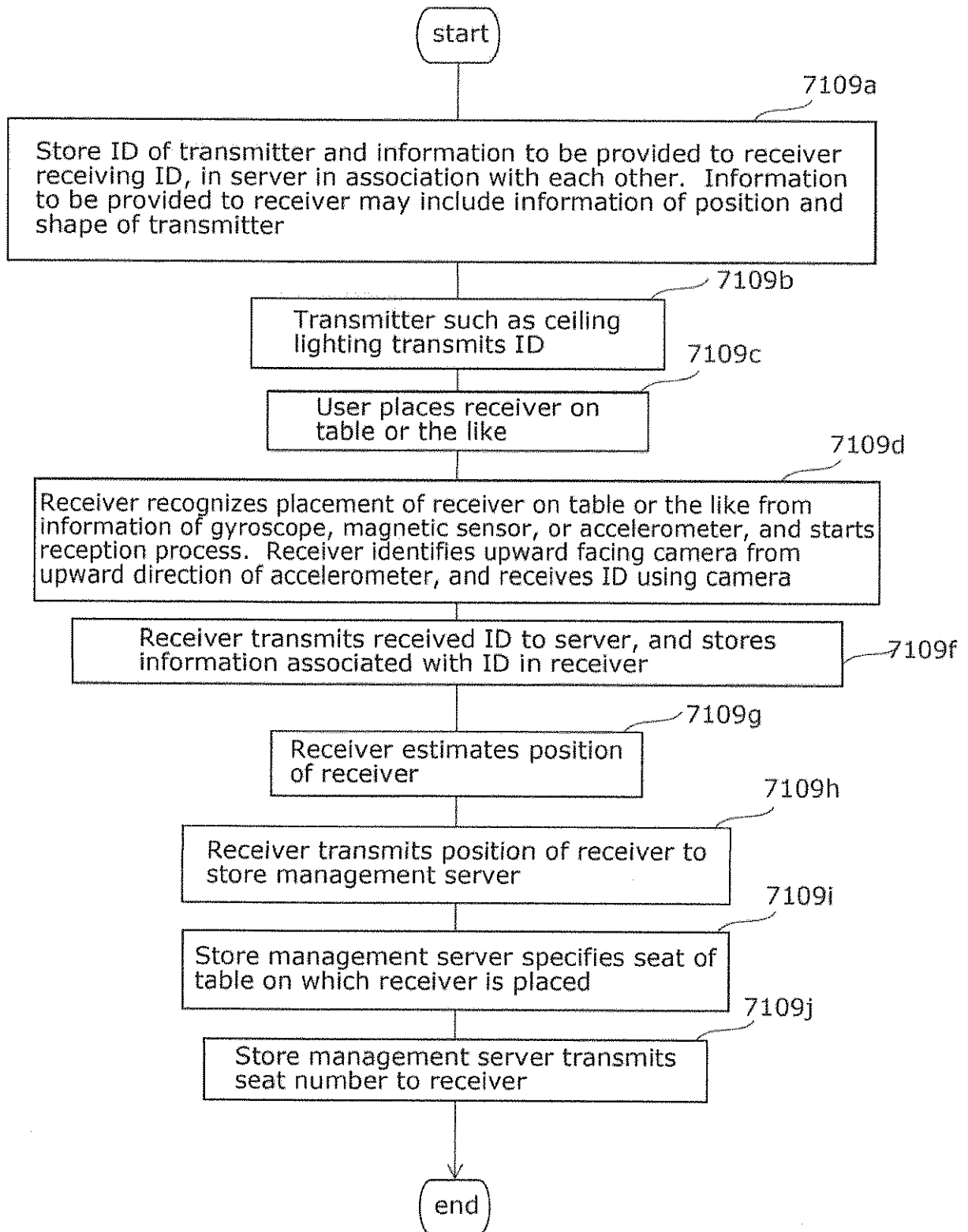


FIG. 223

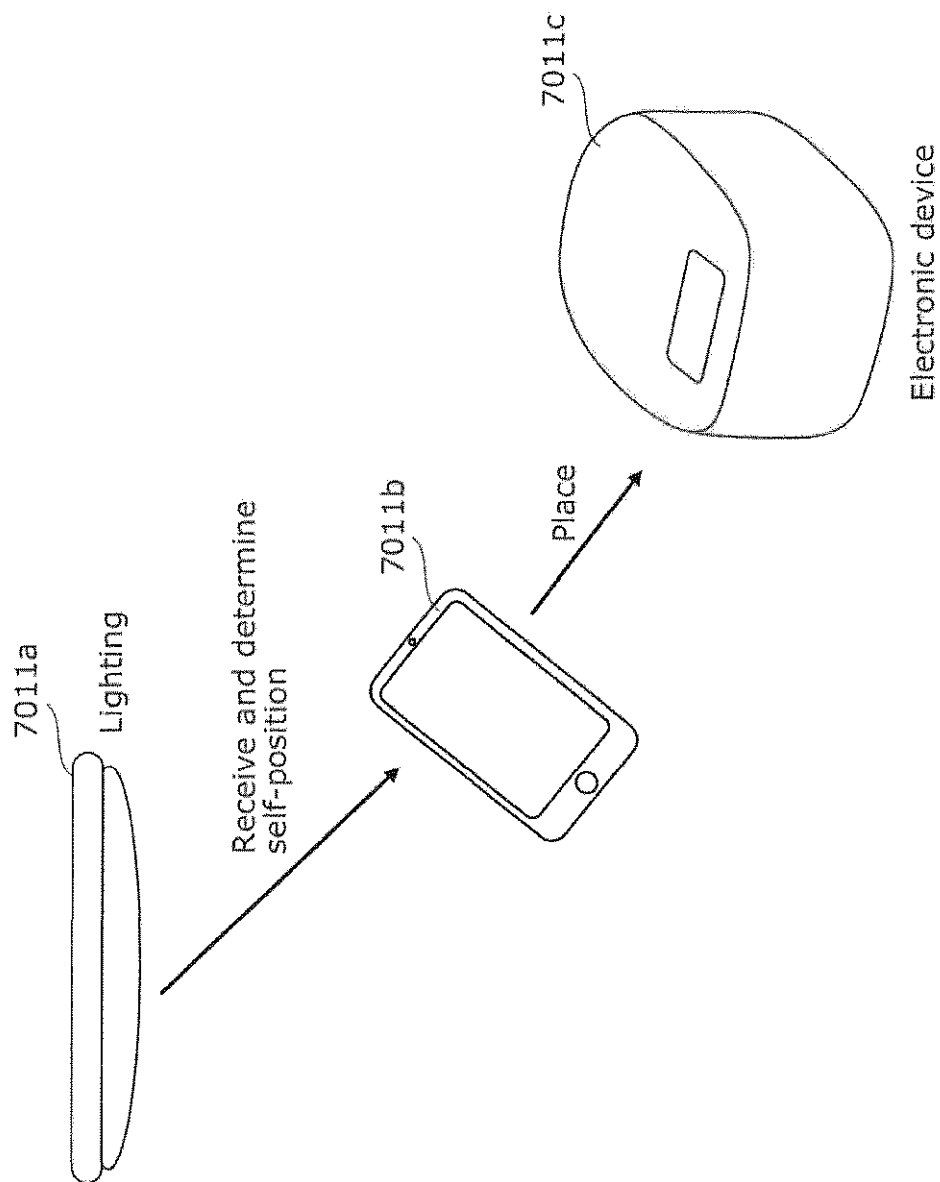


FIG. 224

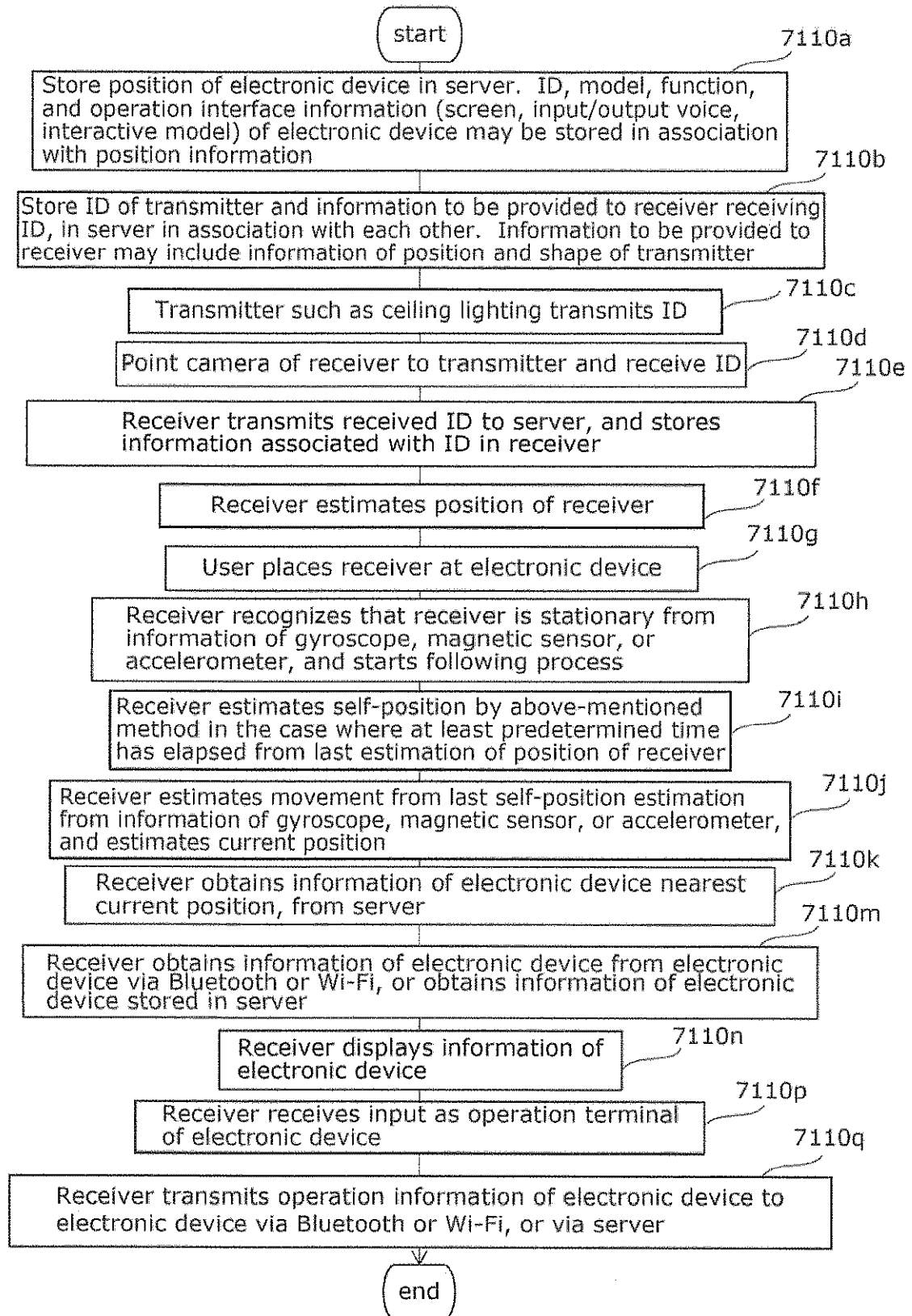


FIG. 225

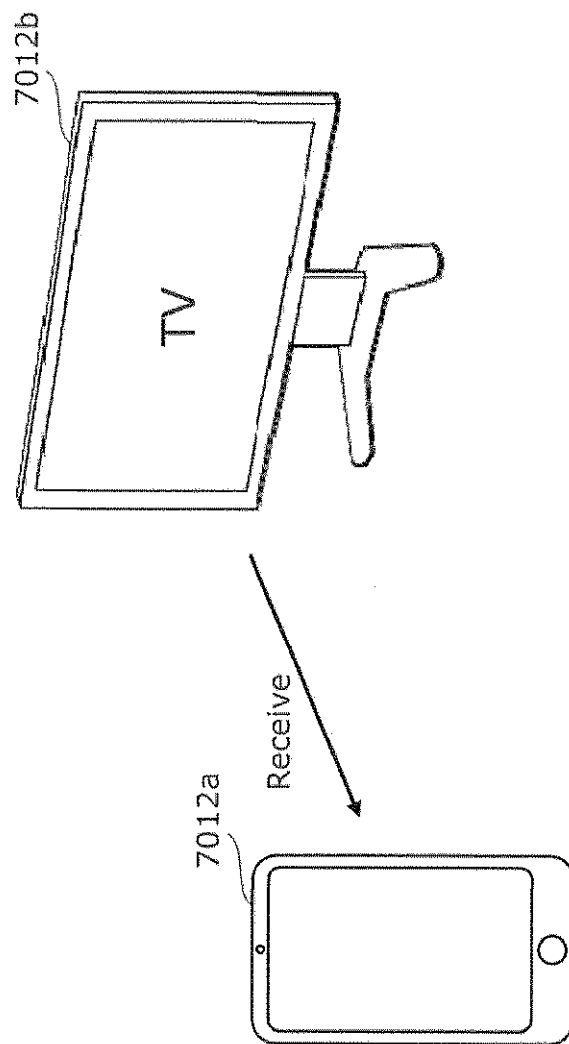


FIG. 226

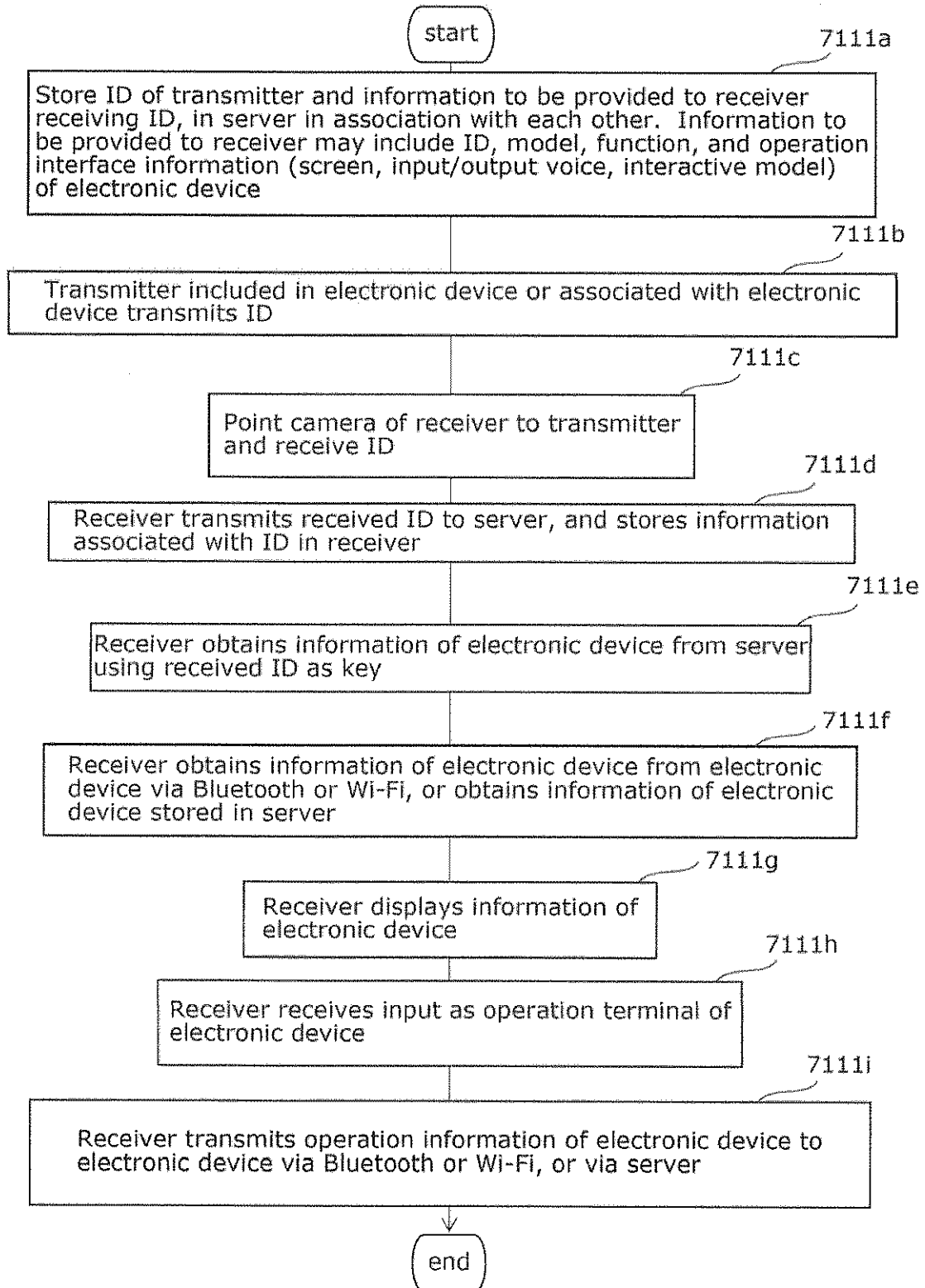


FIG. 227

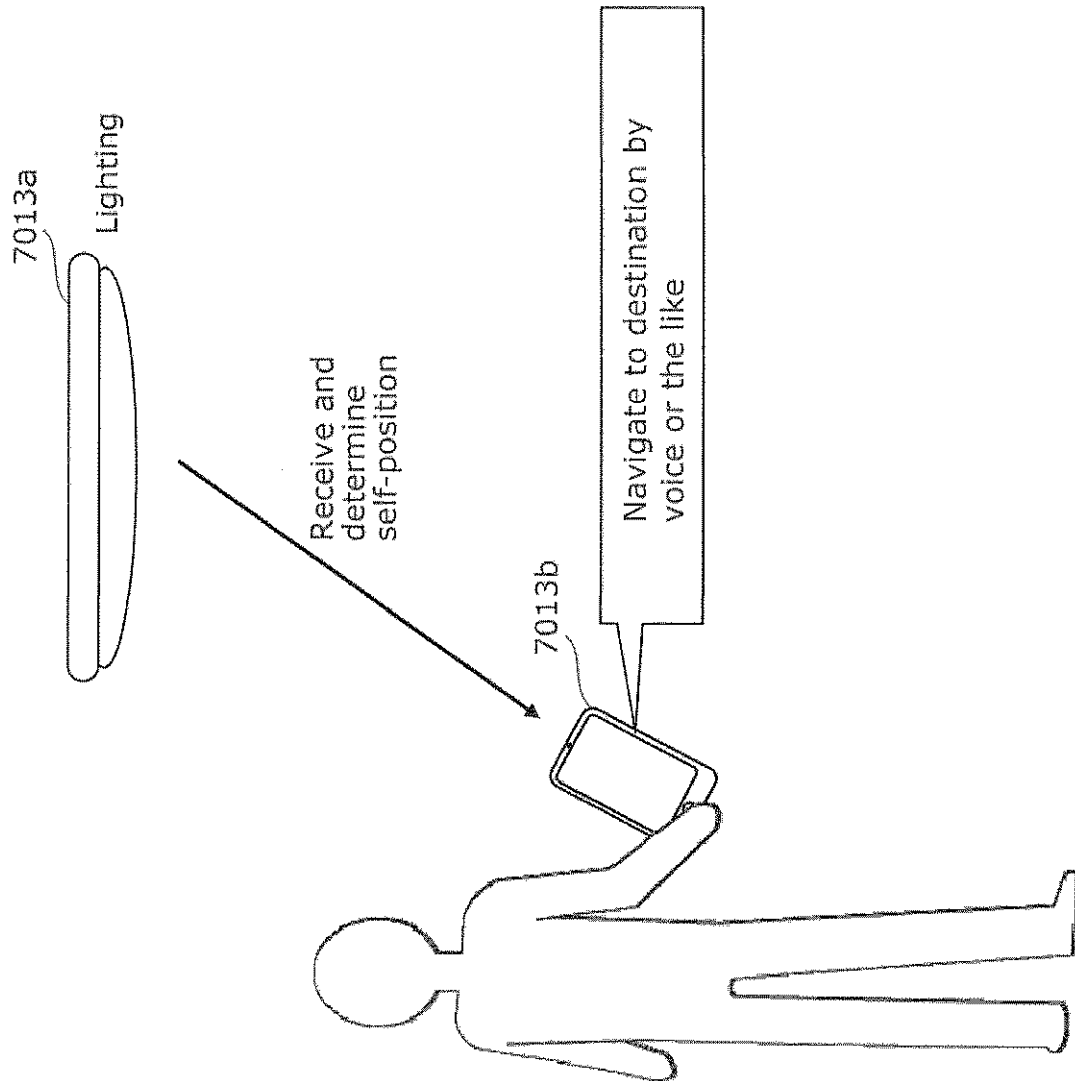


FIG. 228

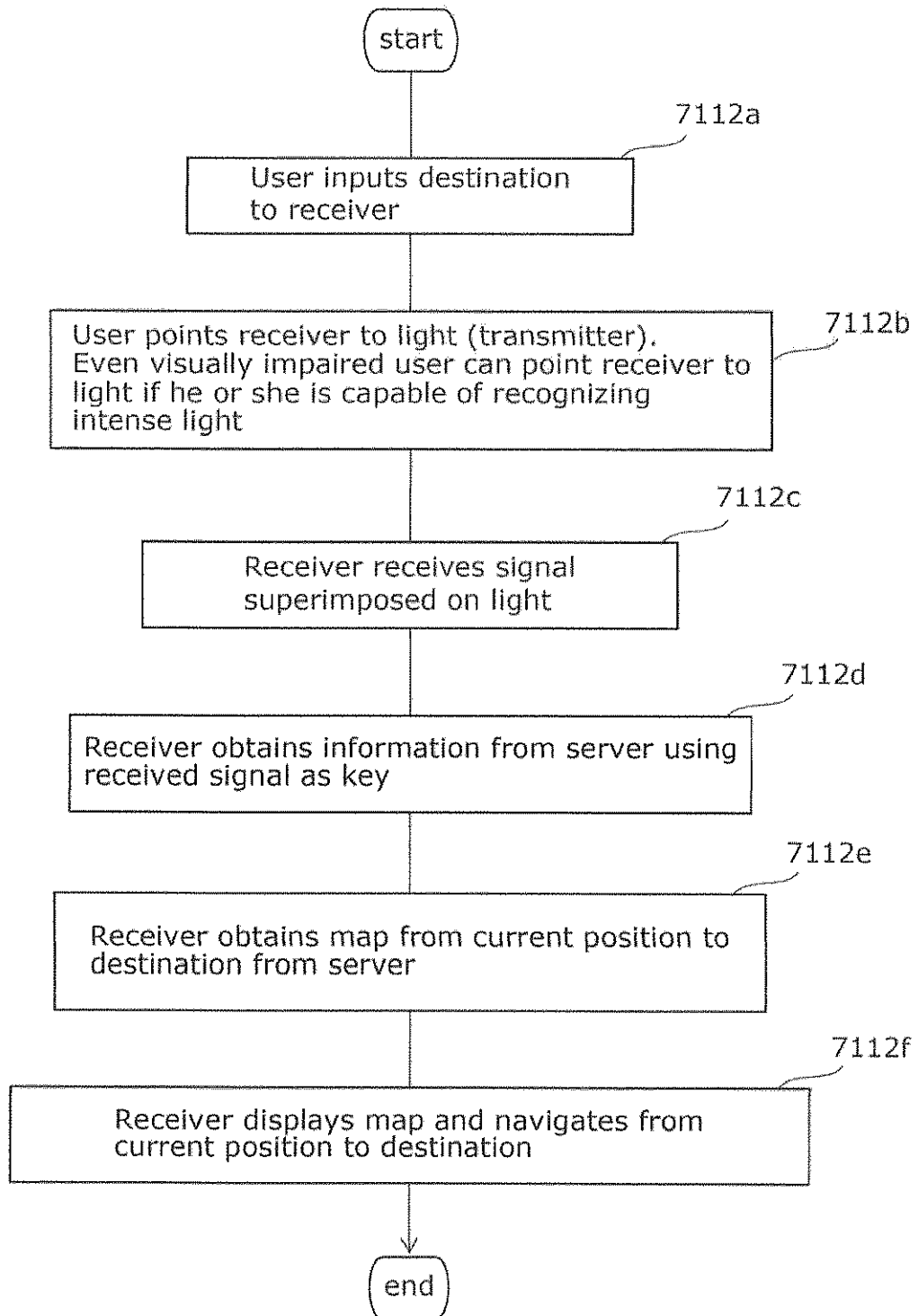


FIG. 229

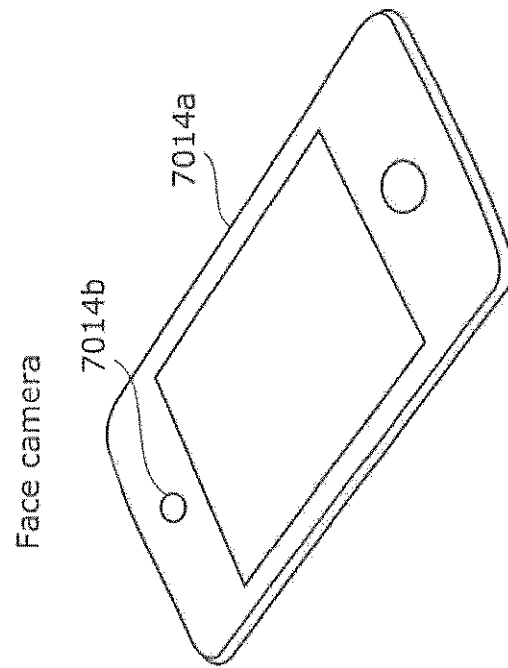


FIG. 230

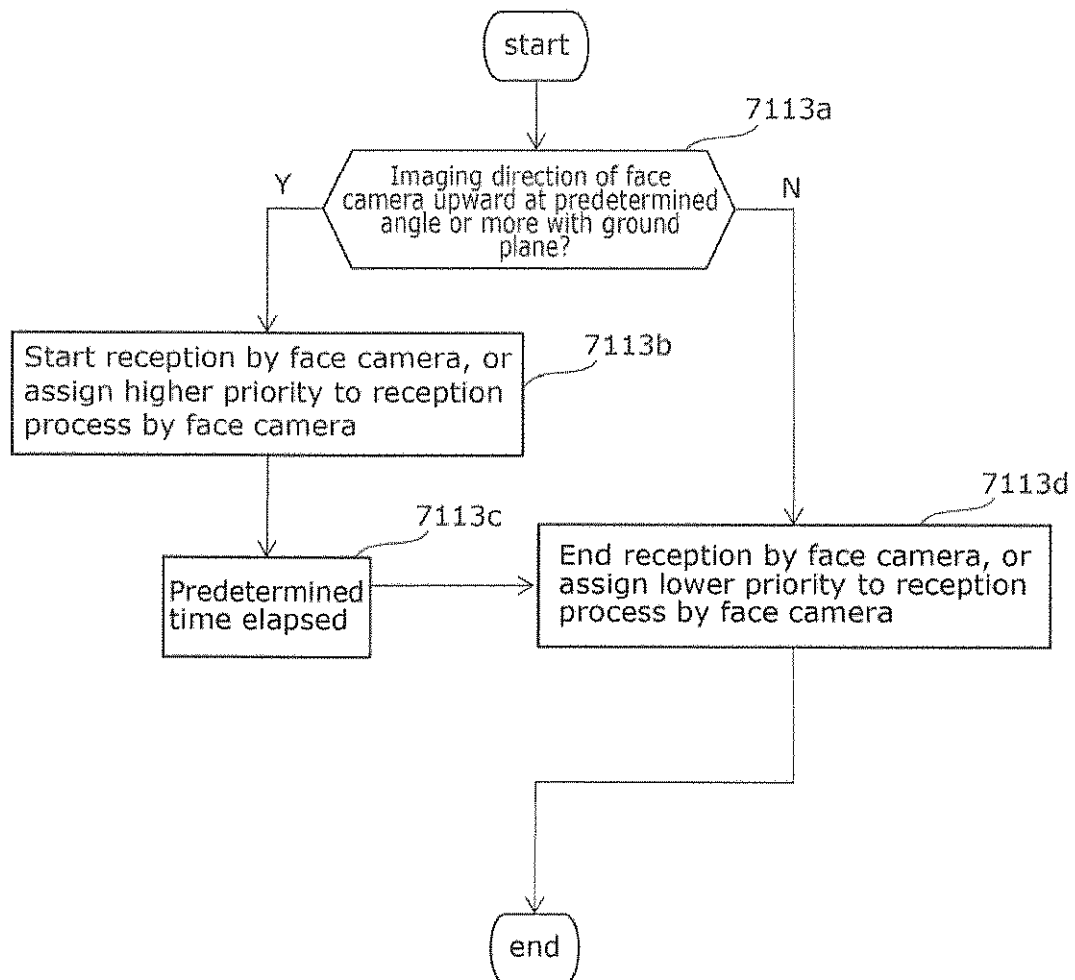


FIG. 231

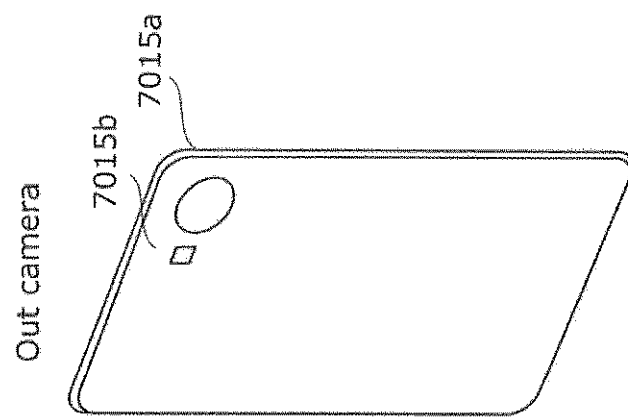


FIG. 232

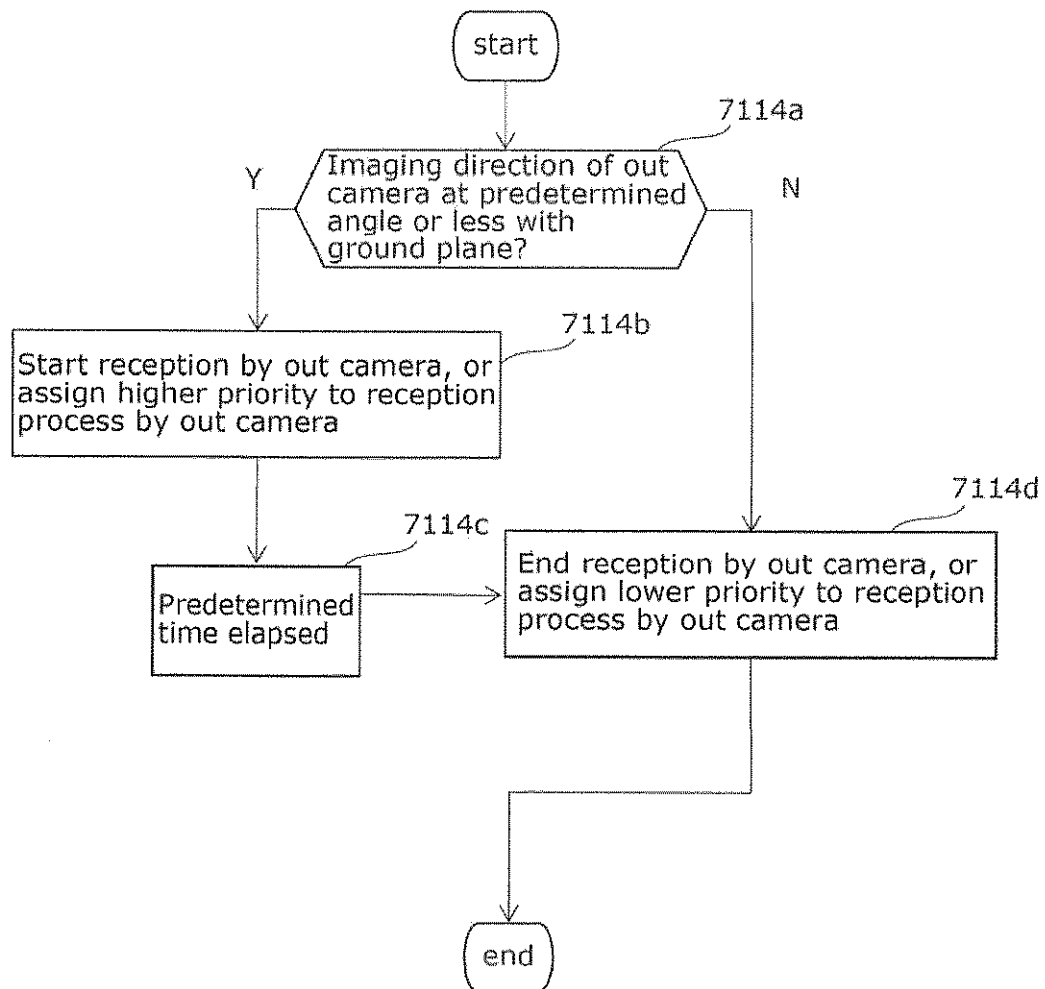


FIG. 233

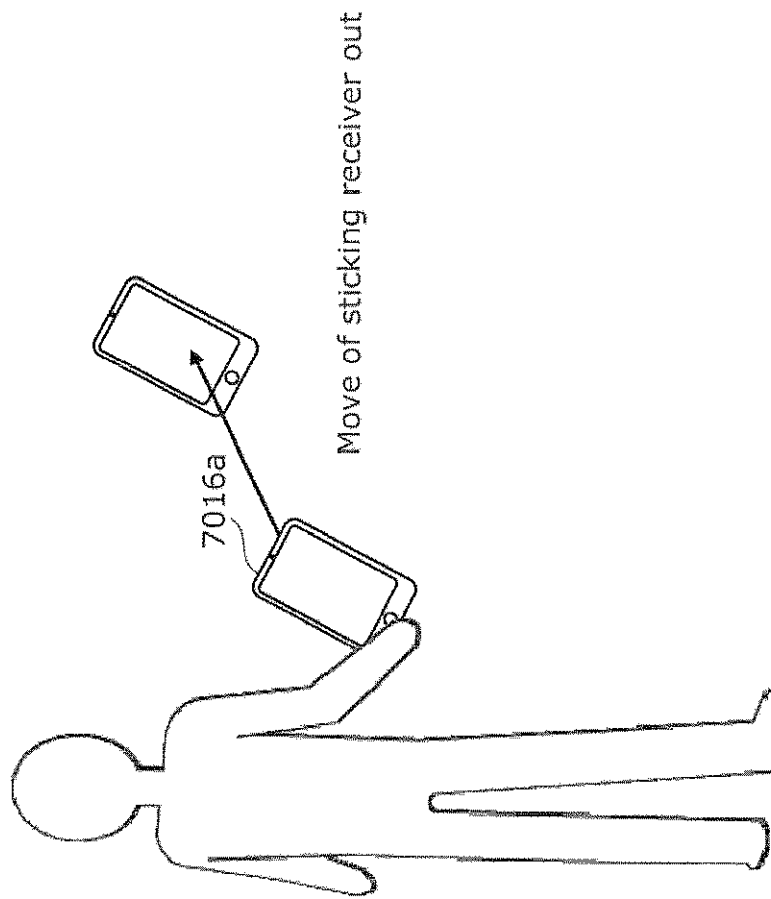


FIG. 234

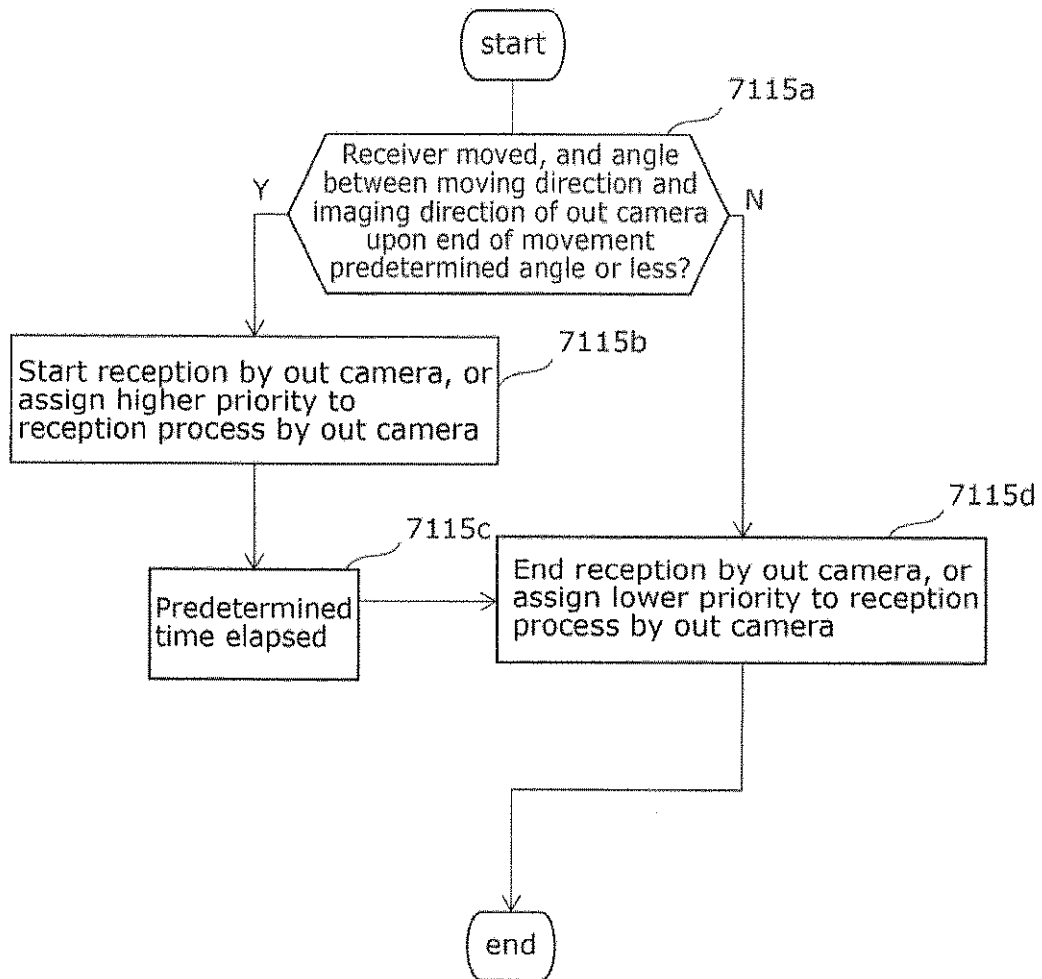


FIG. 235

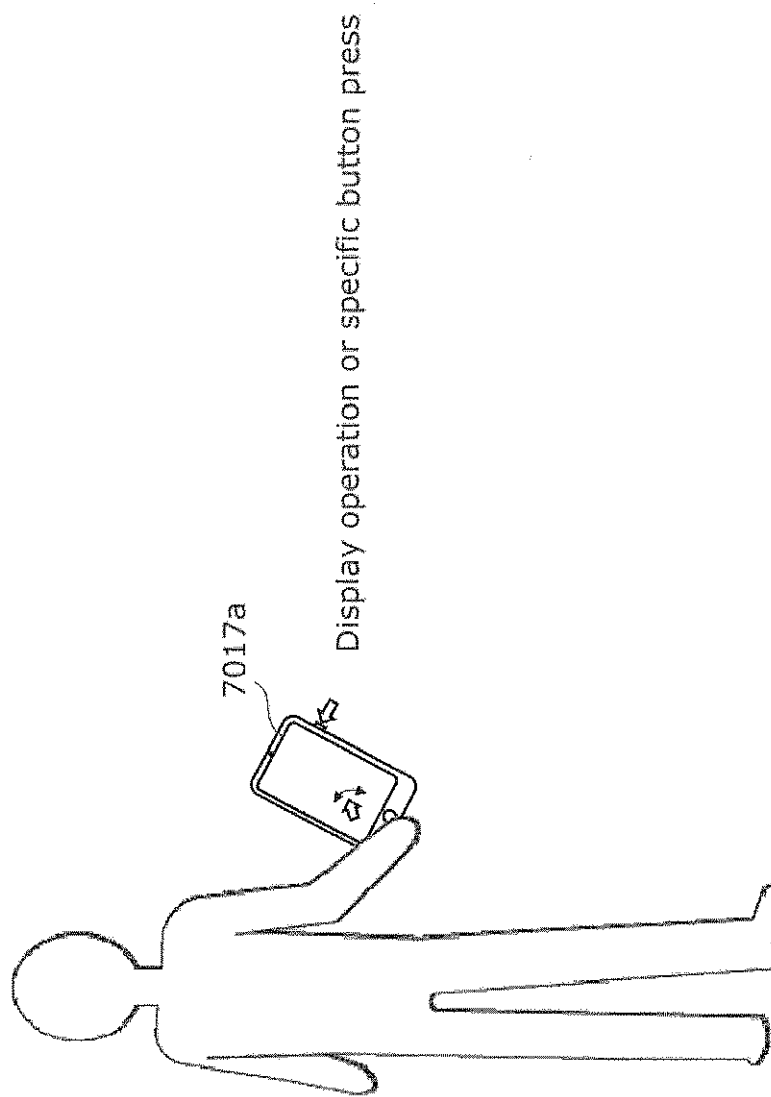


FIG. 236

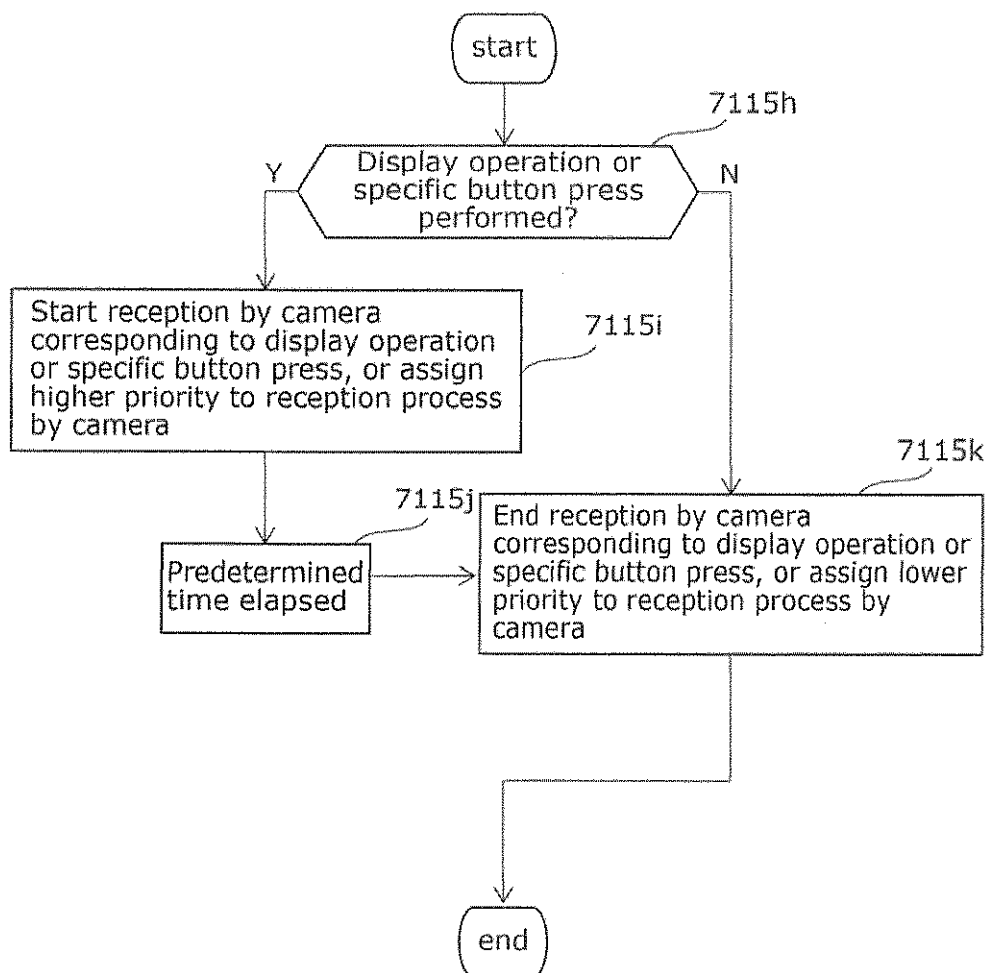


FIG. 237

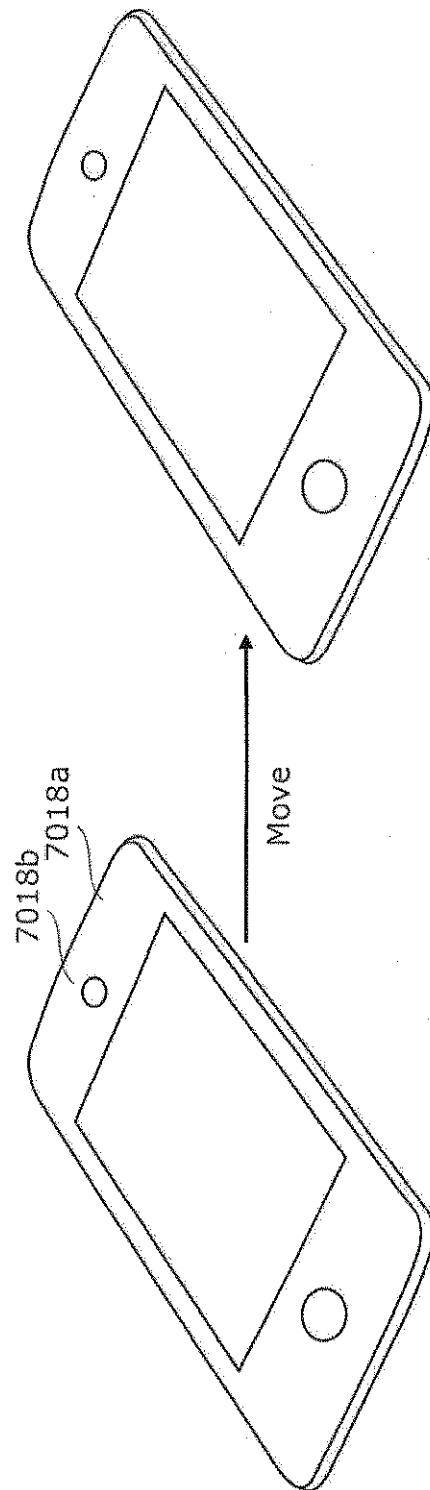


FIG. 238

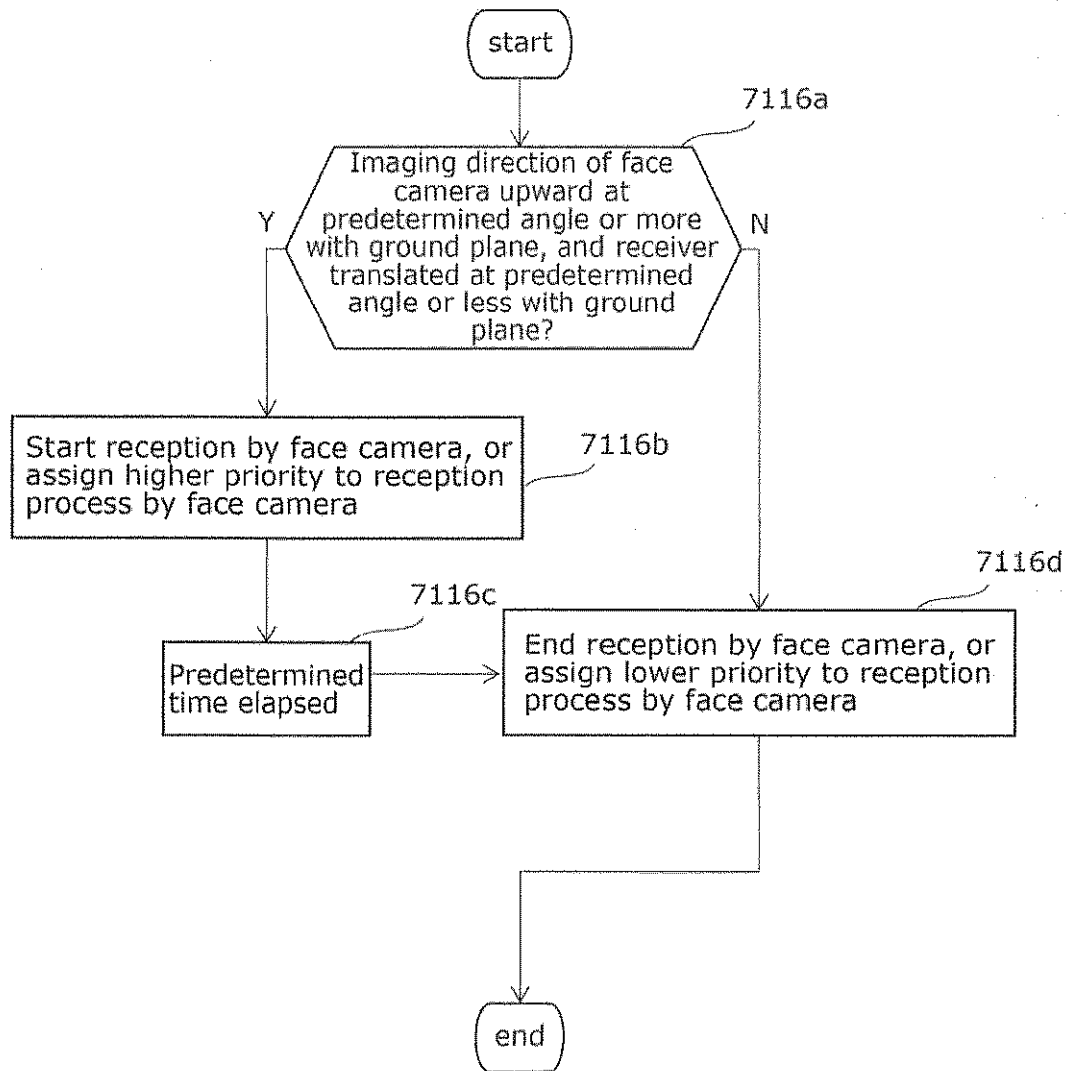


FIG. 239

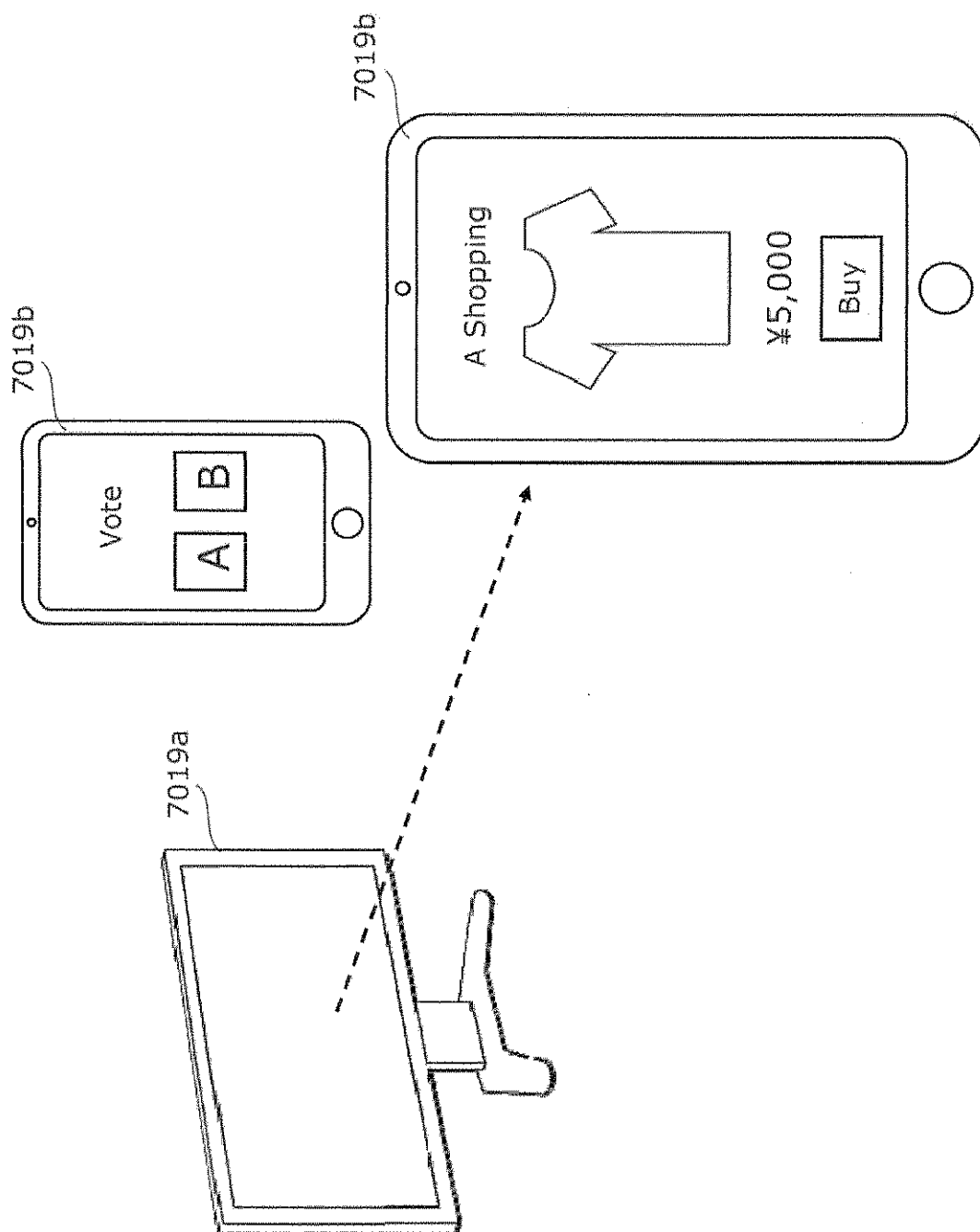


FIG. 240

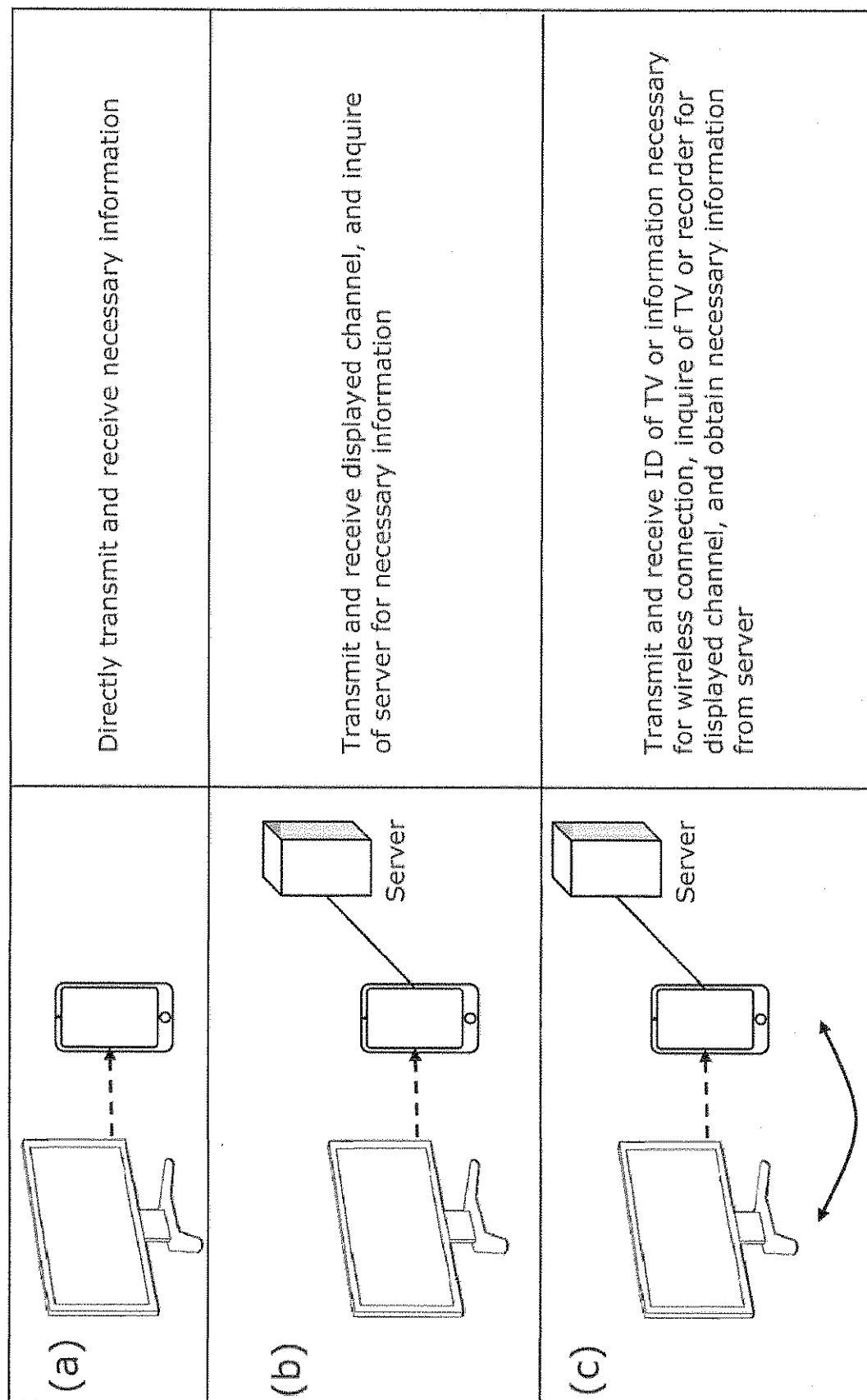


FIG. 241

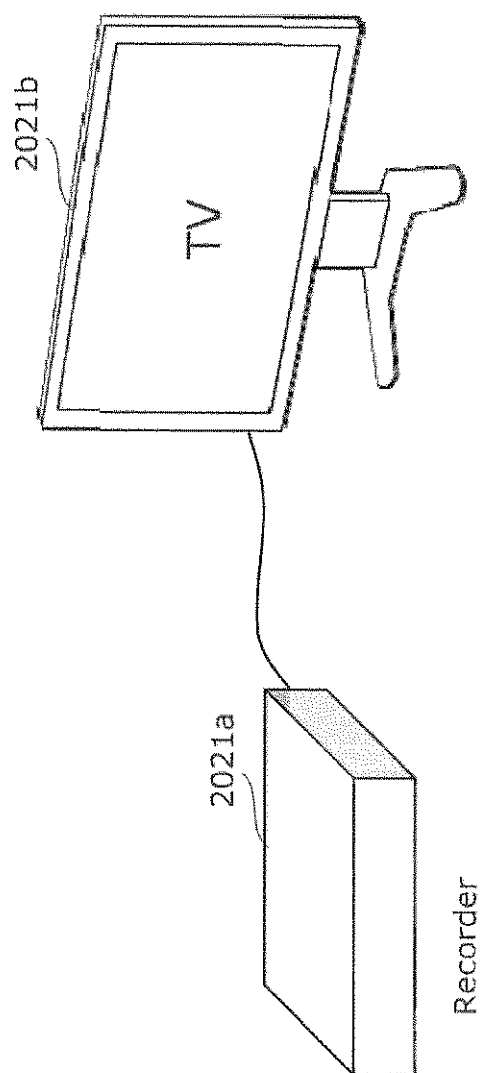


FIG. 242

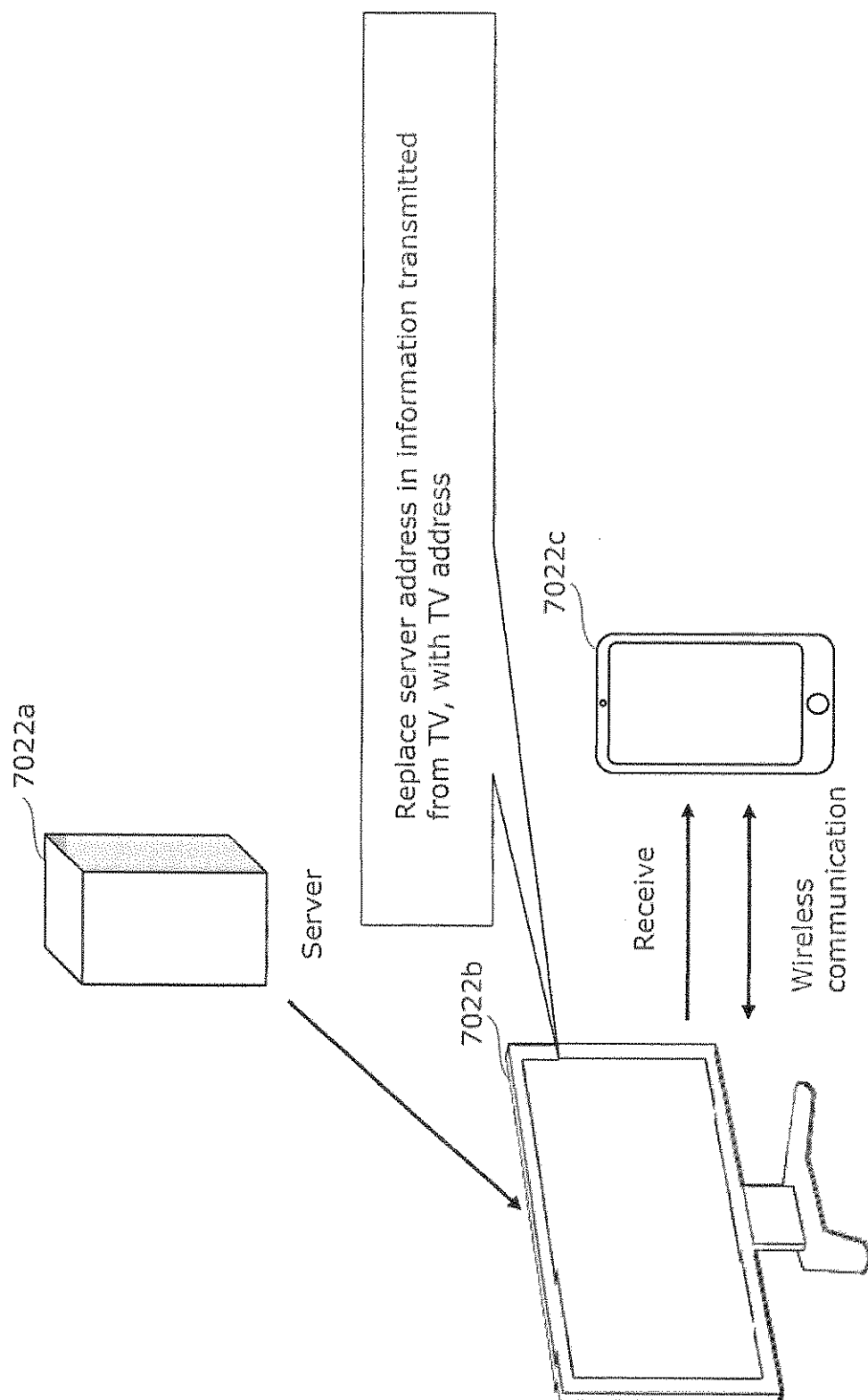


FIG. 243

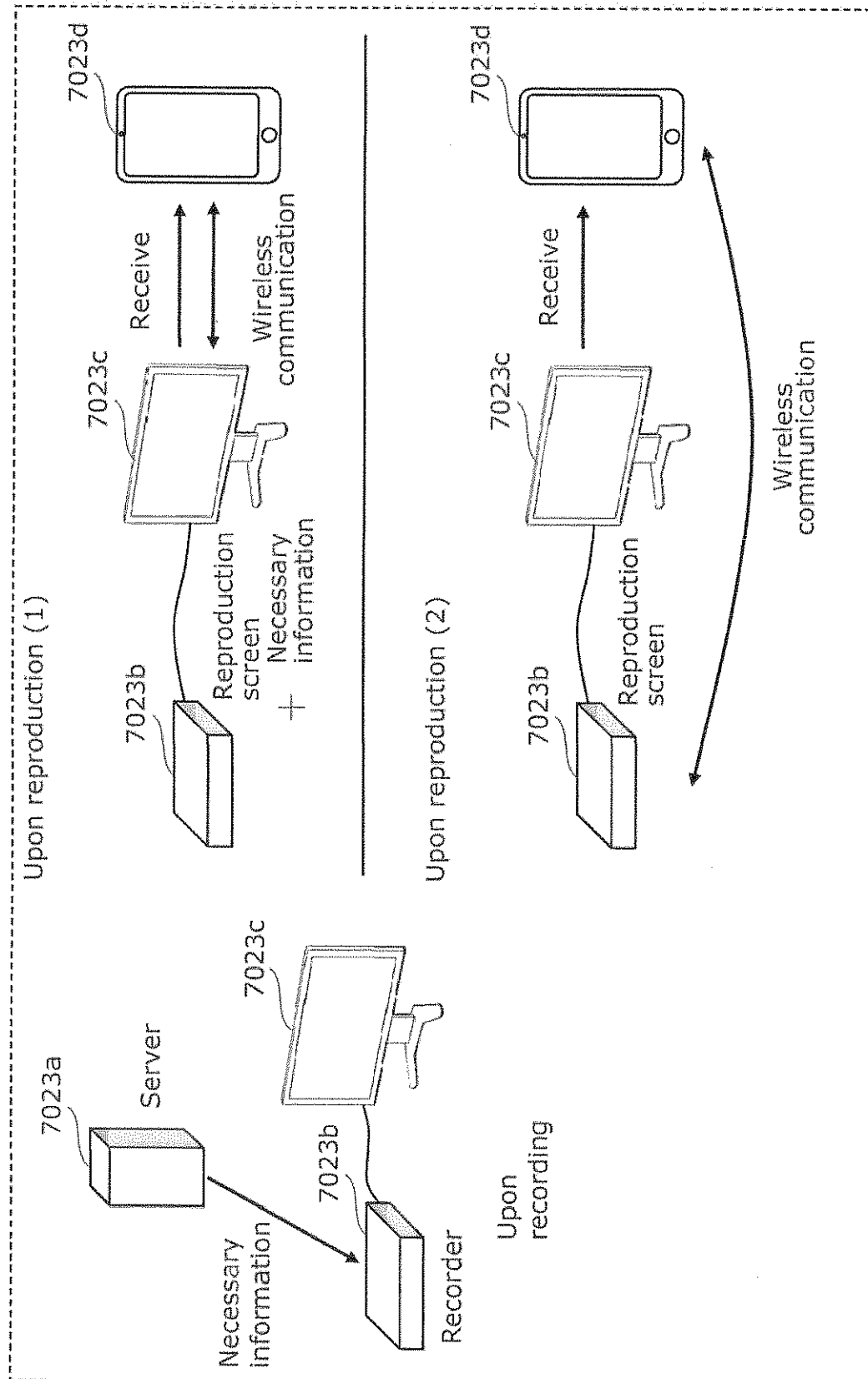


FIG. 244

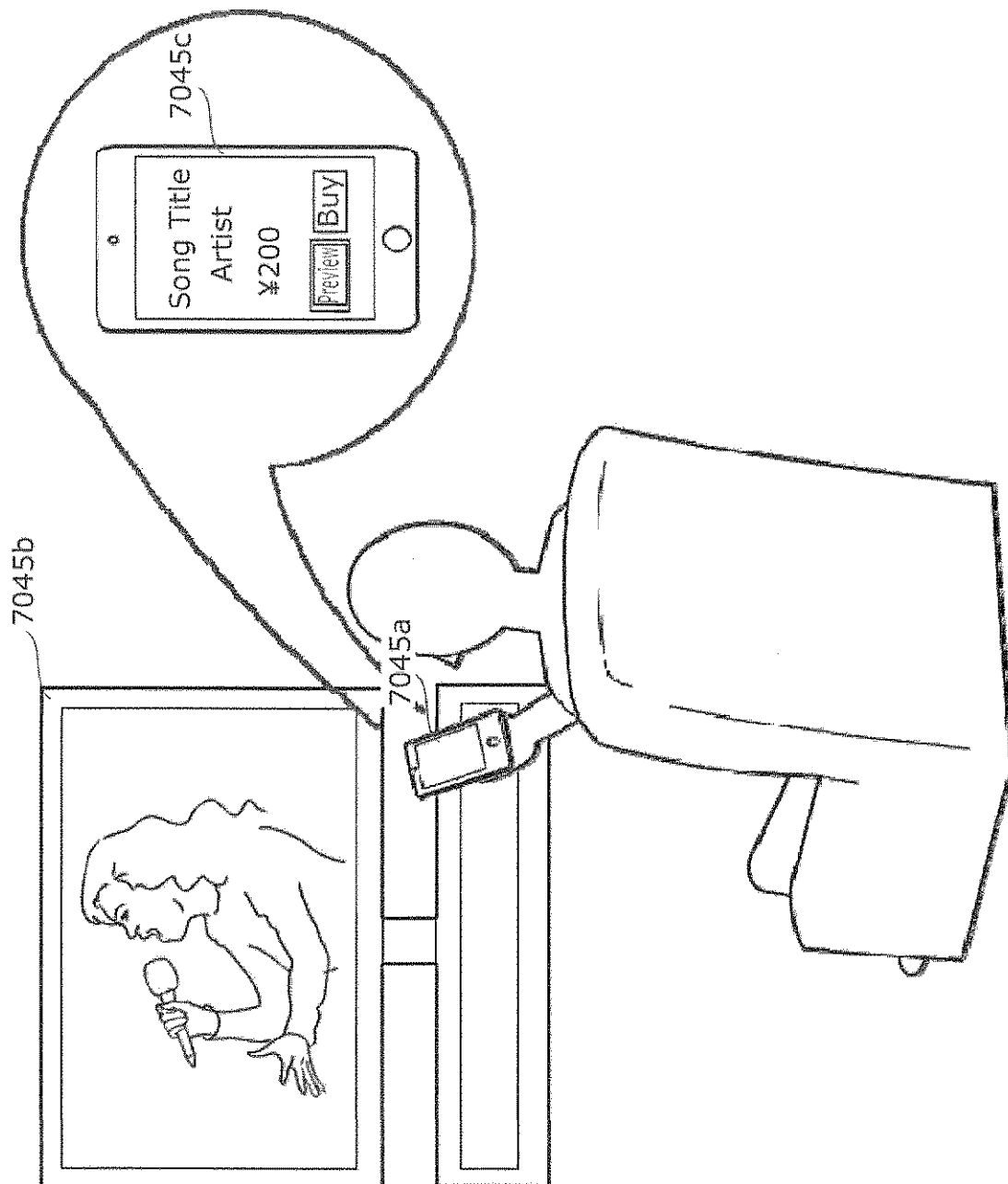


FIG. 245

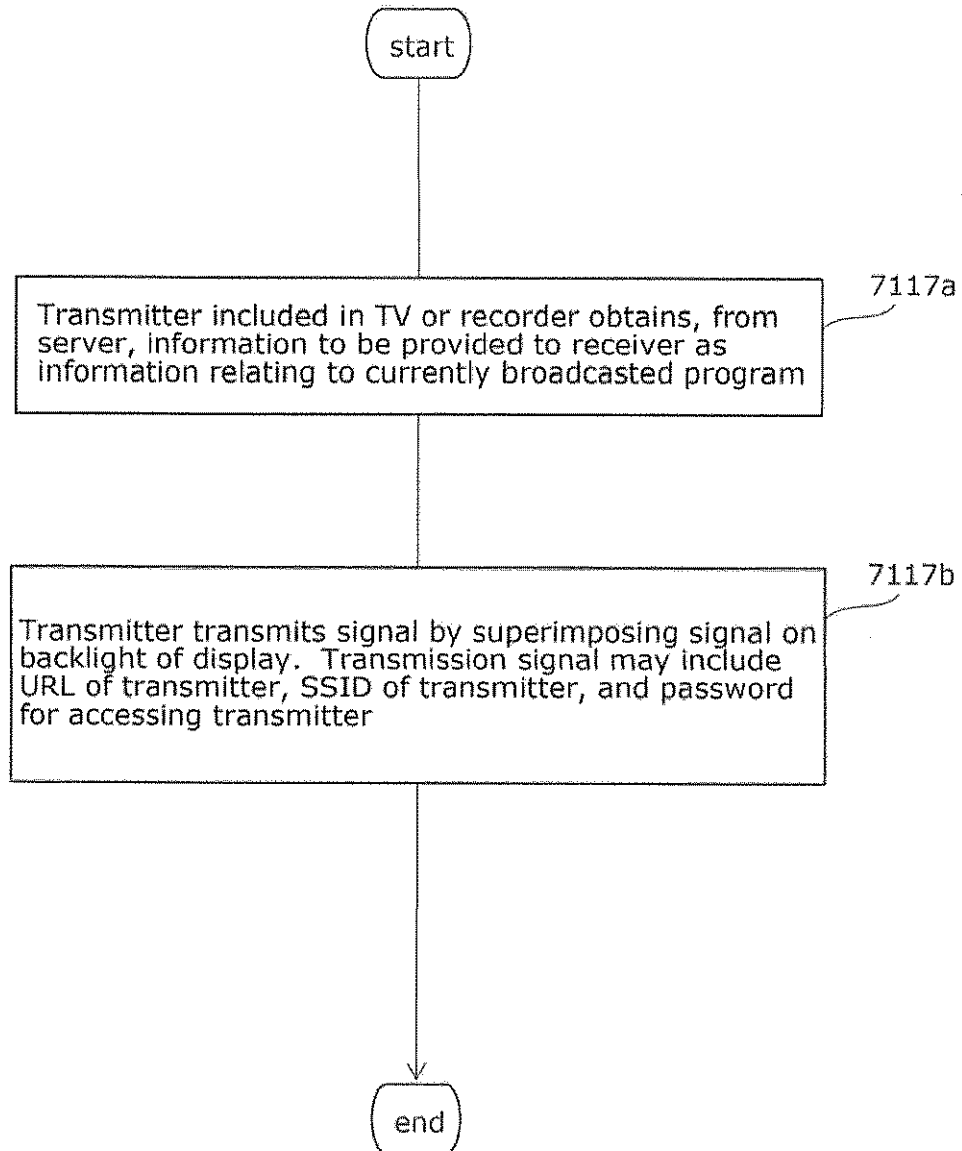


FIG. 246

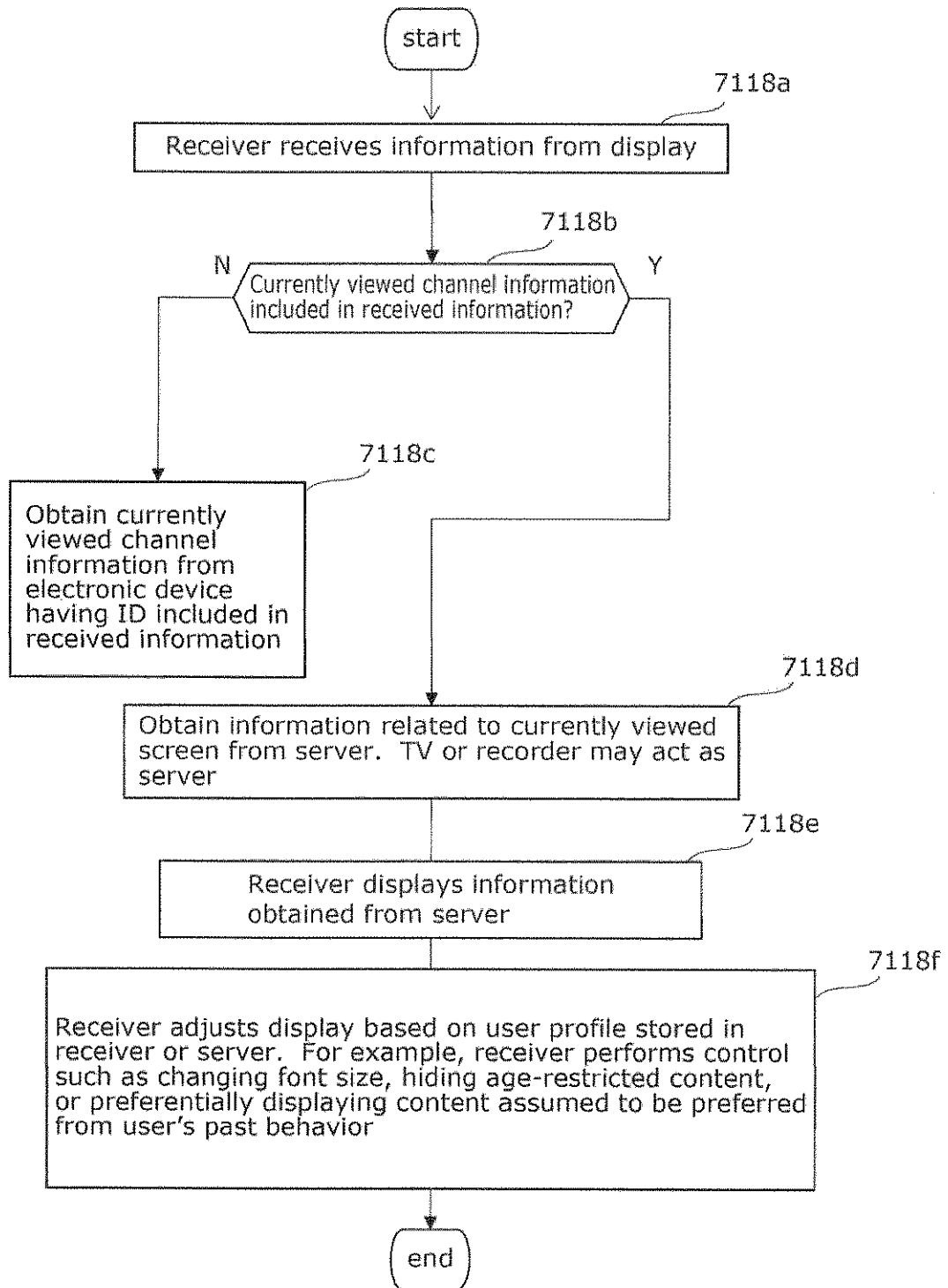


FIG. 247

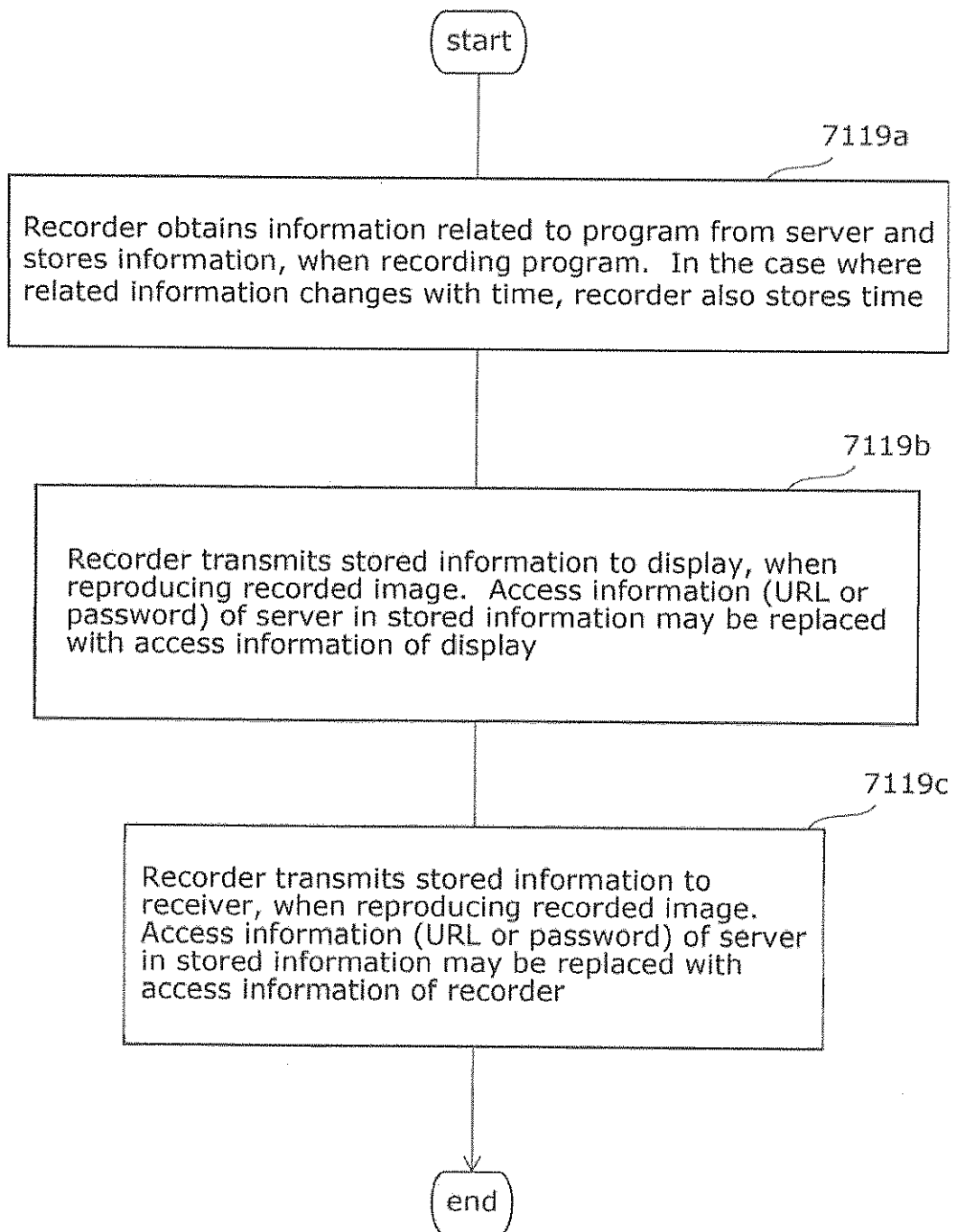


FIG. 248

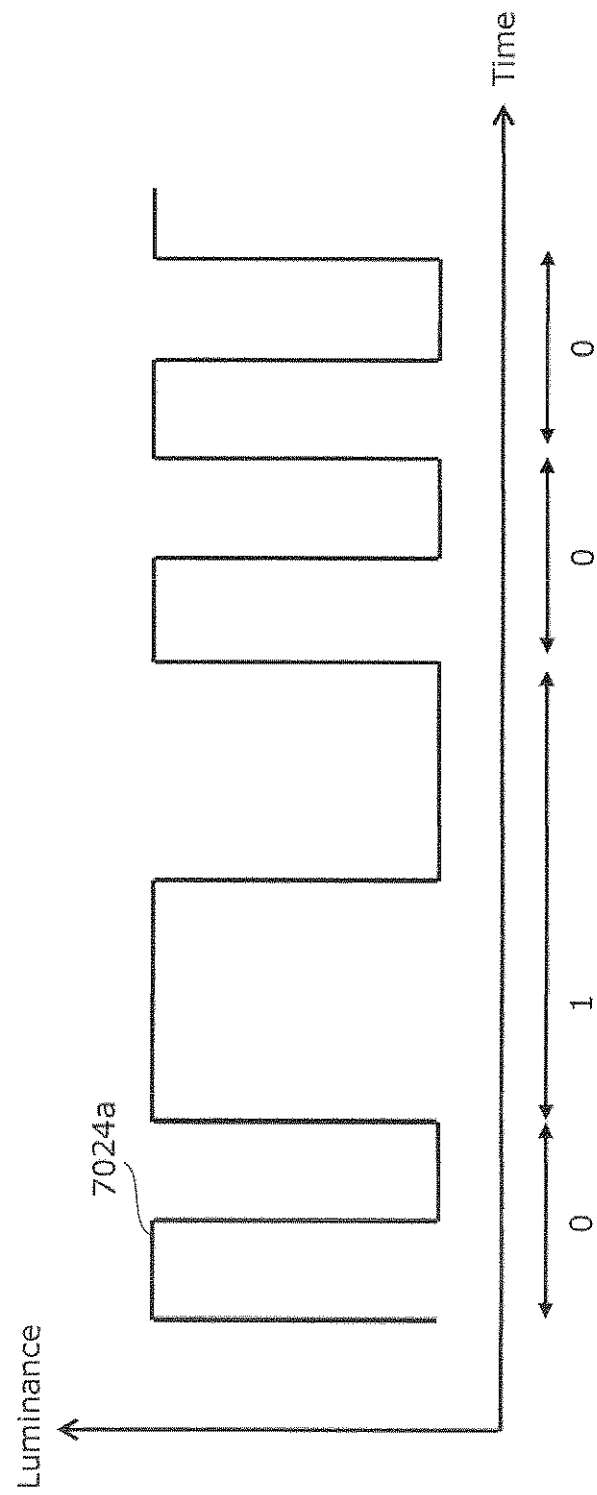


FIG. 249

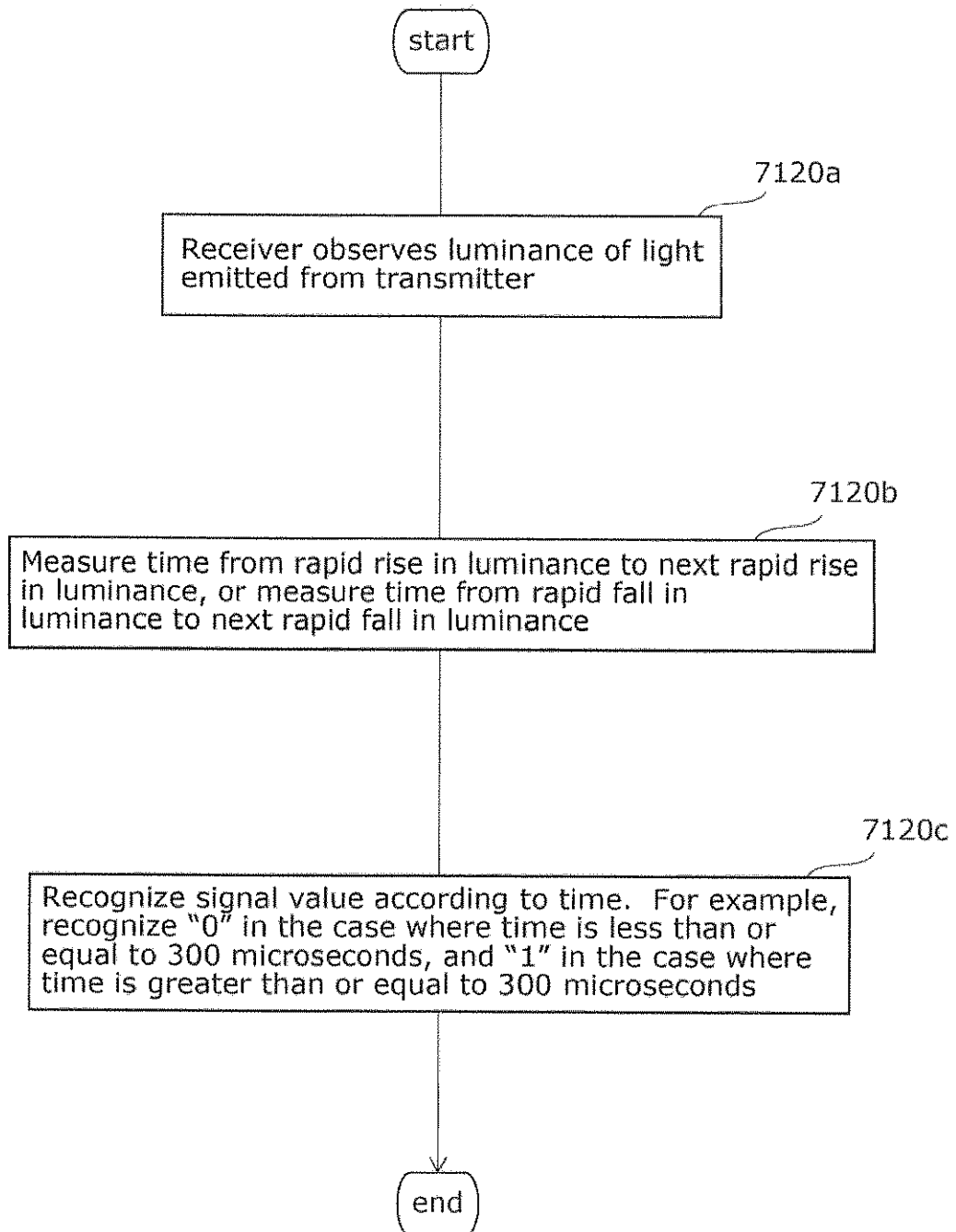


FIG. 250

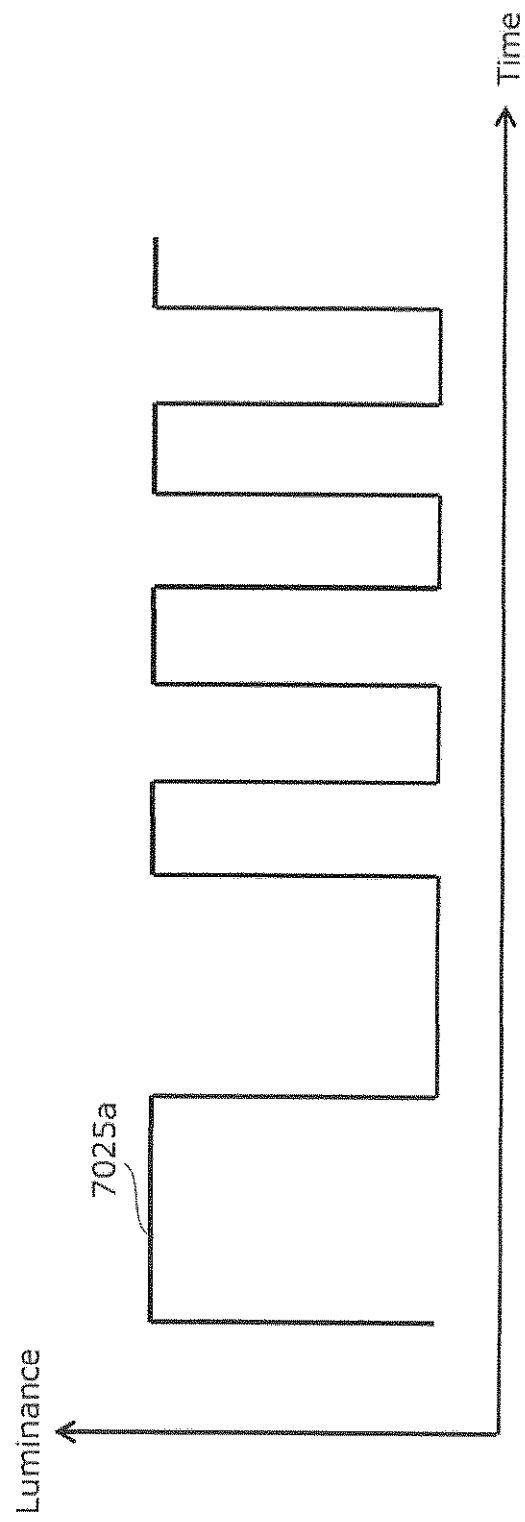


FIG. 251

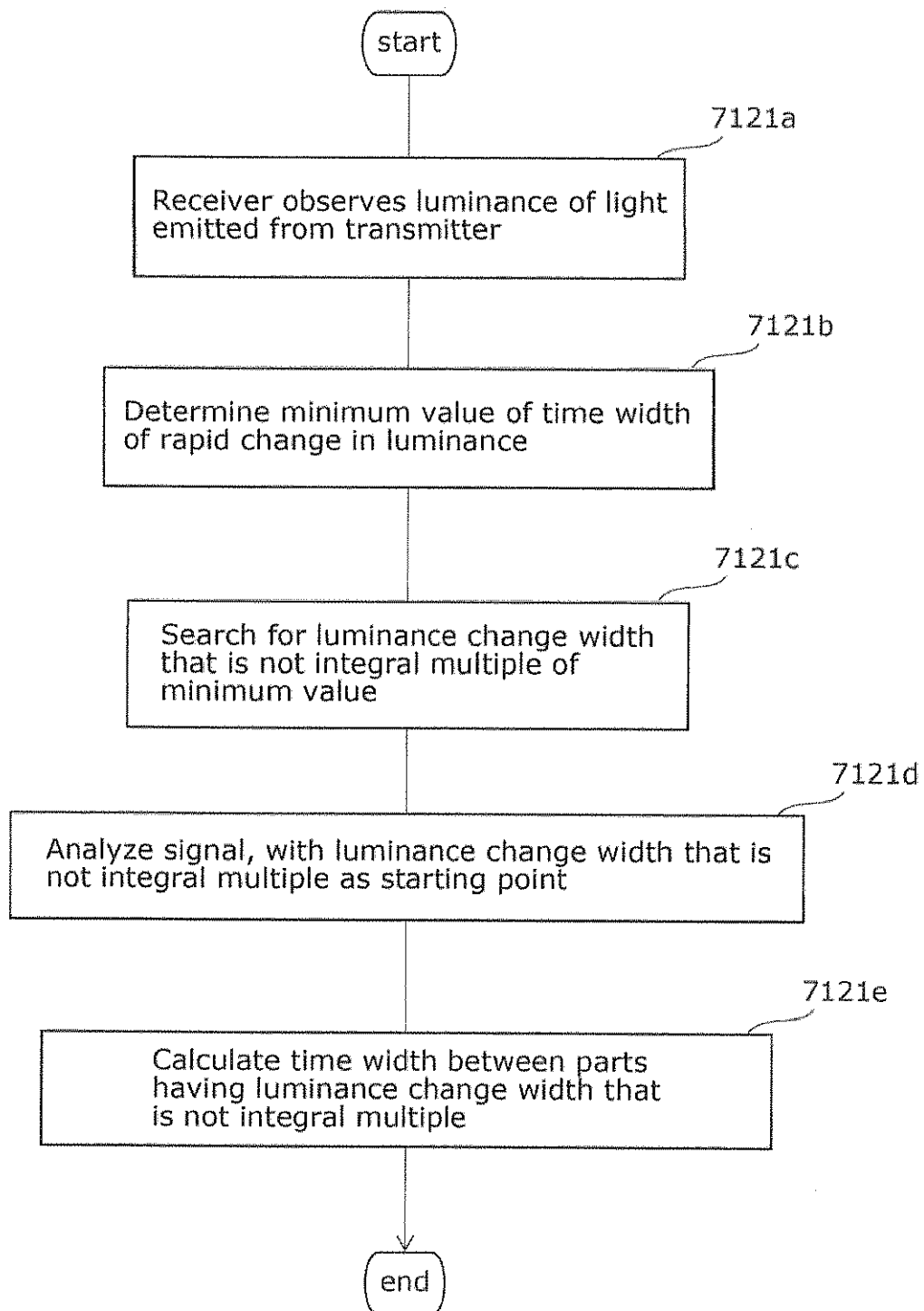


FIG. 252

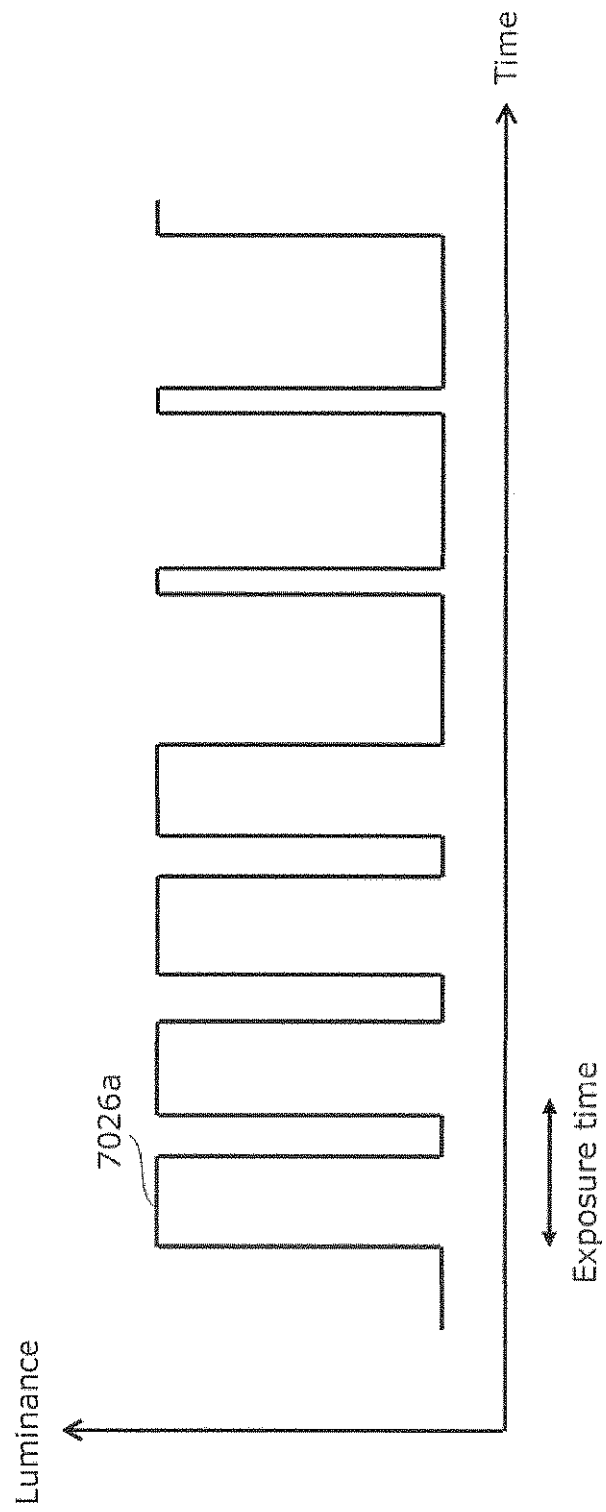


FIG. 253

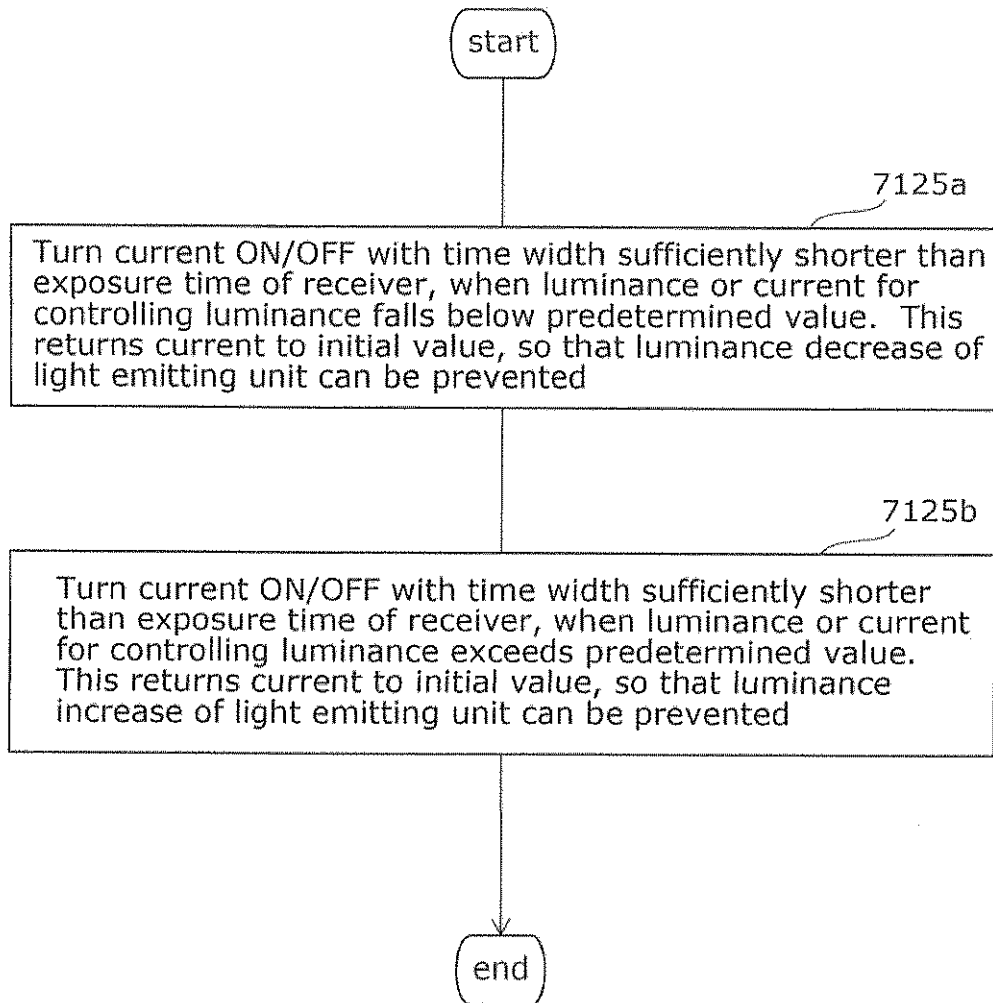


FIG. 254

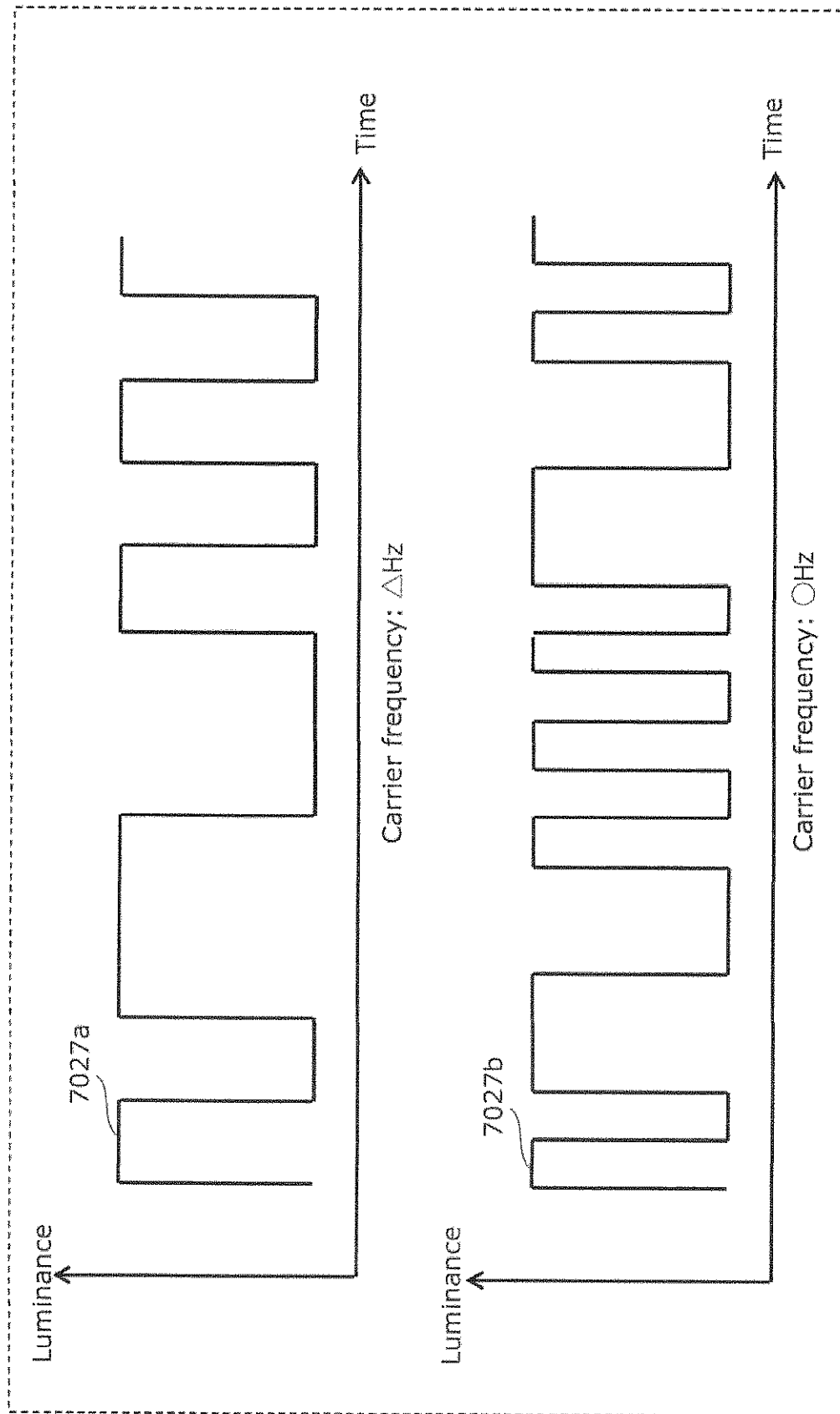


FIG. 255

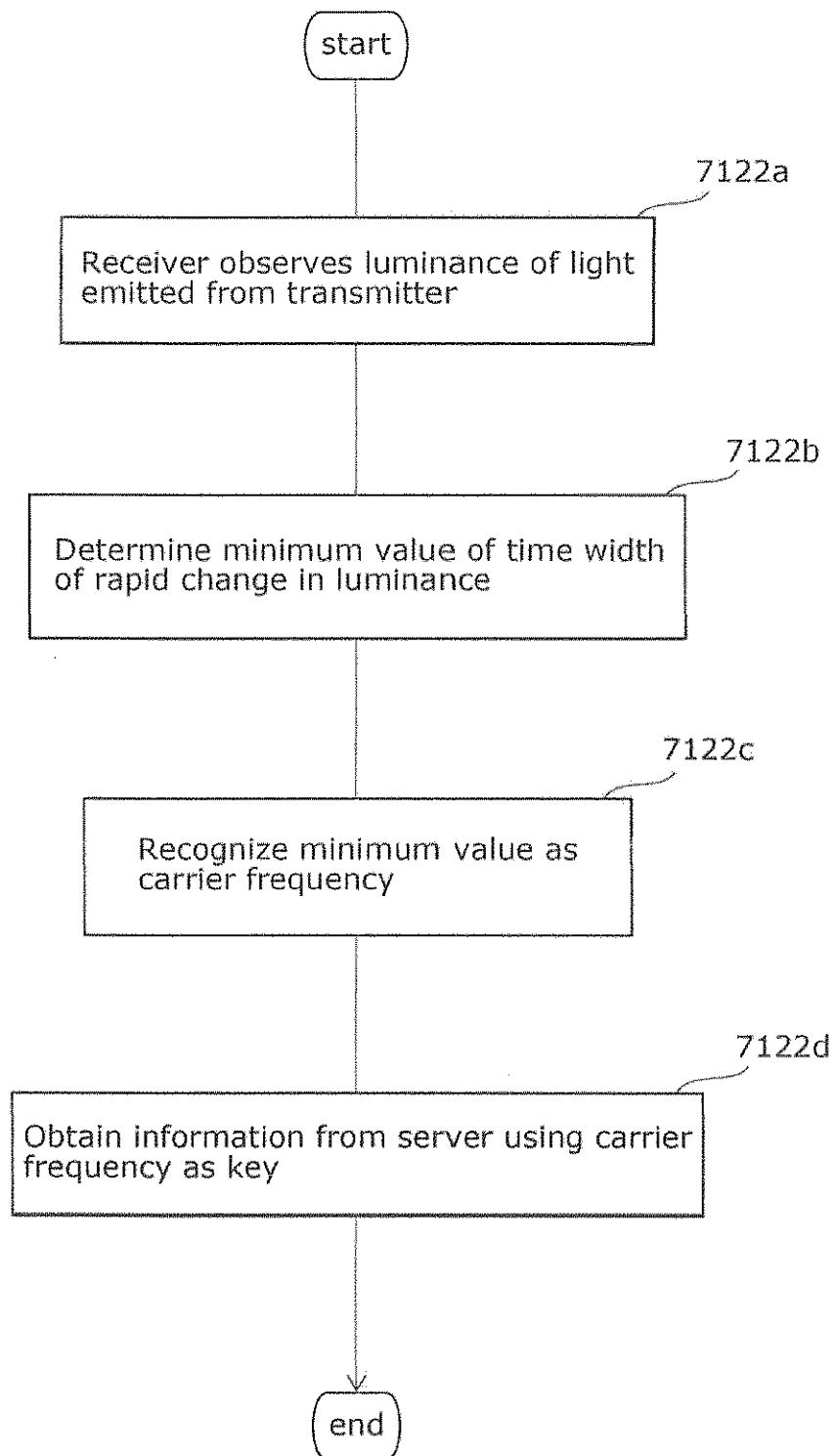


FIG. 256

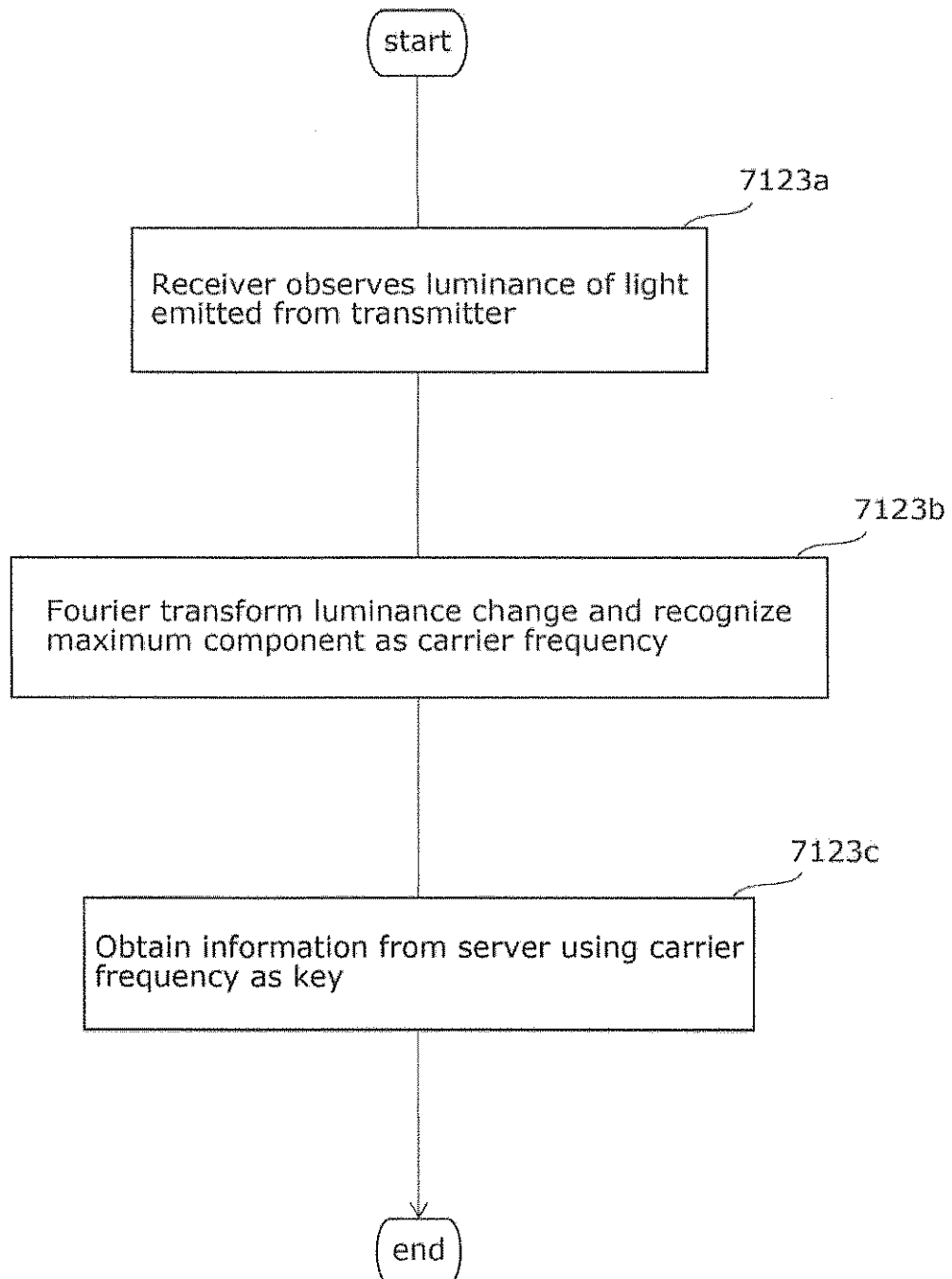


FIG. 257

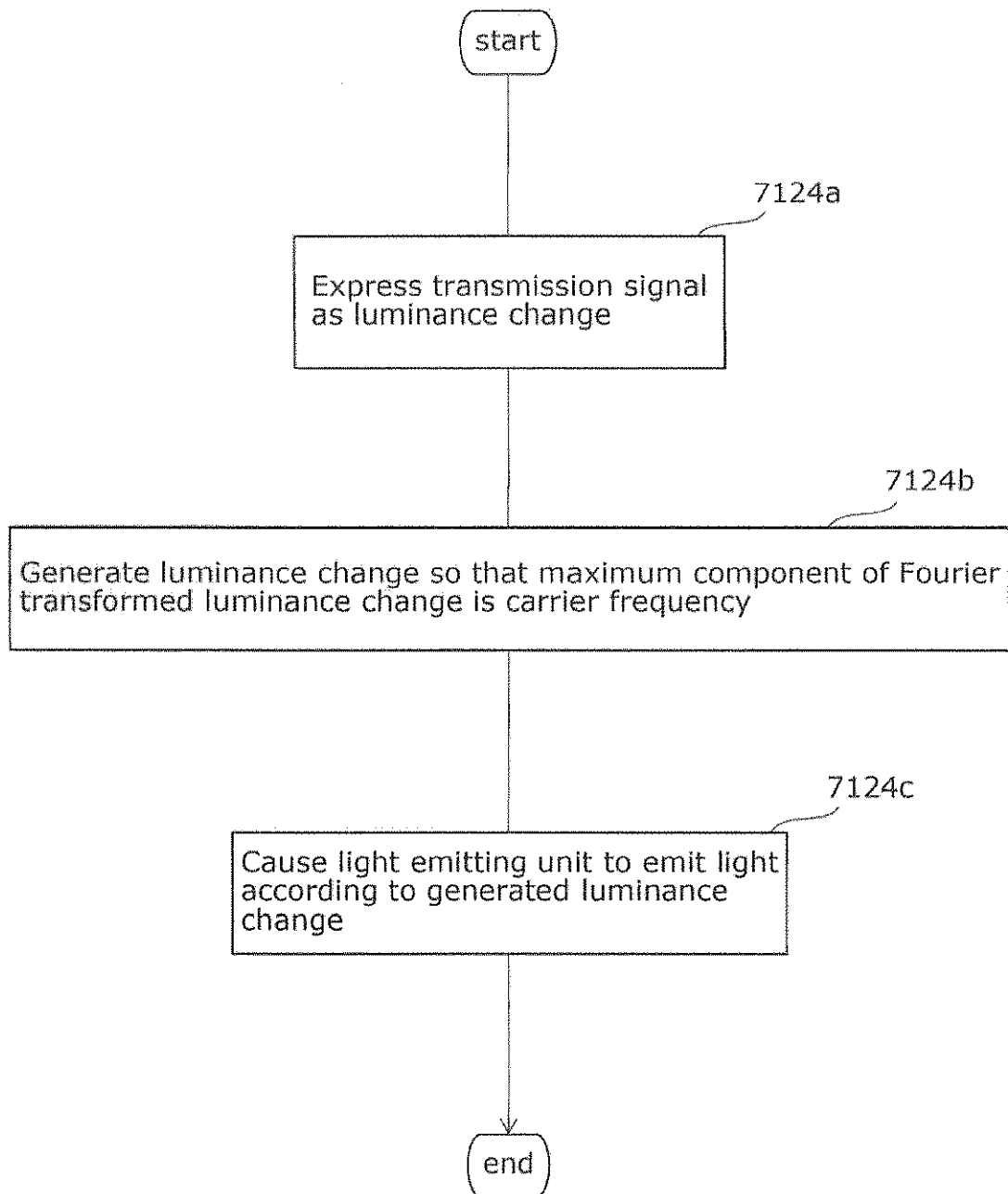


FIG. 258

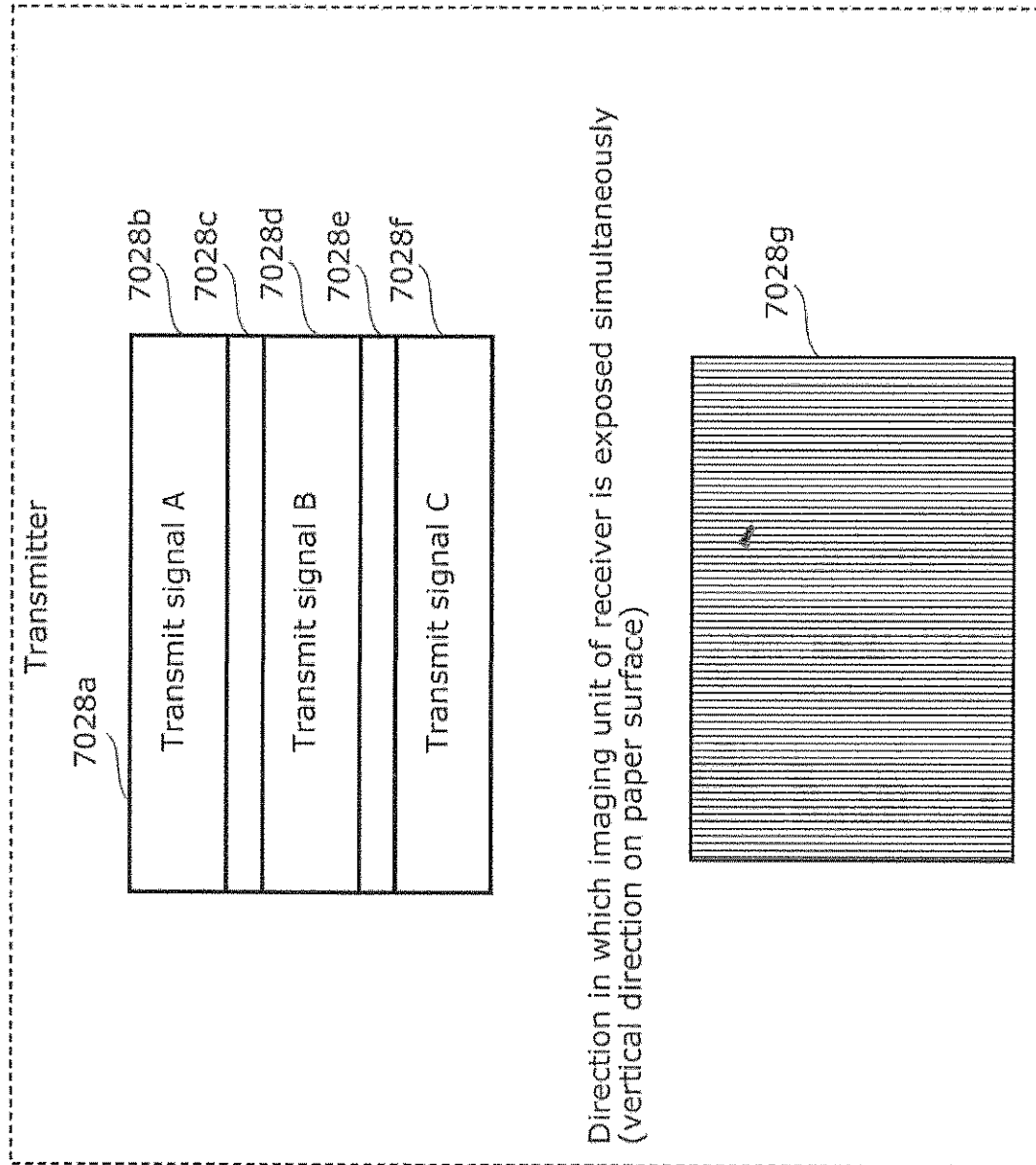


FIG. 259

Transmitter

A	C	B
B	A	C
C	B	A

7029a

FIG. 260

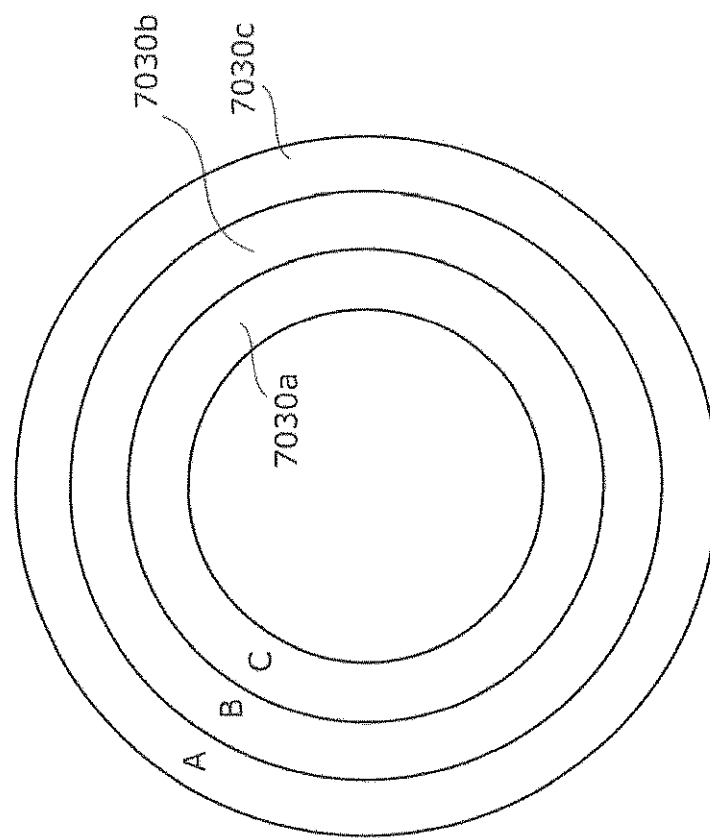


FIG. 261

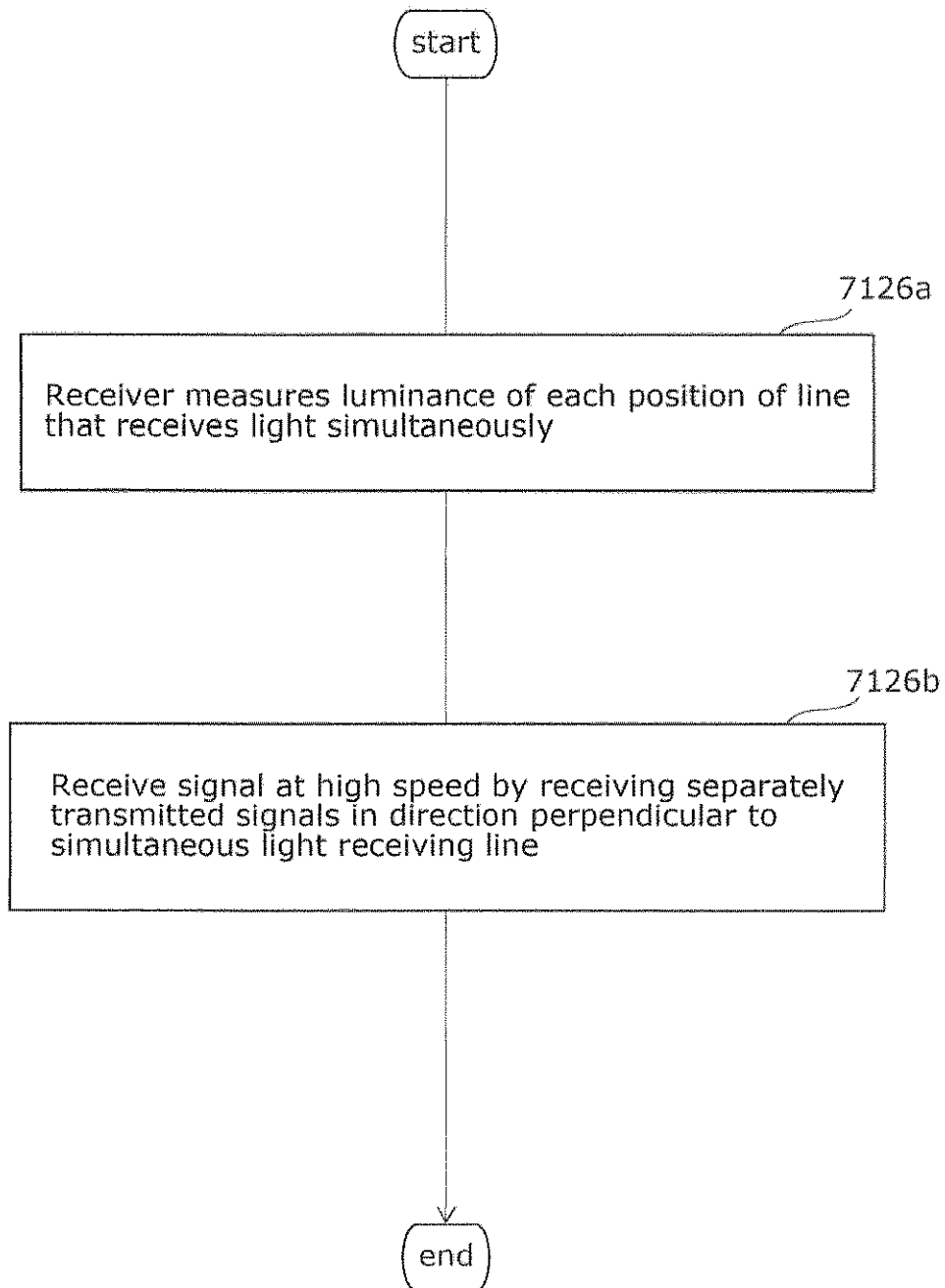


FIG. 262

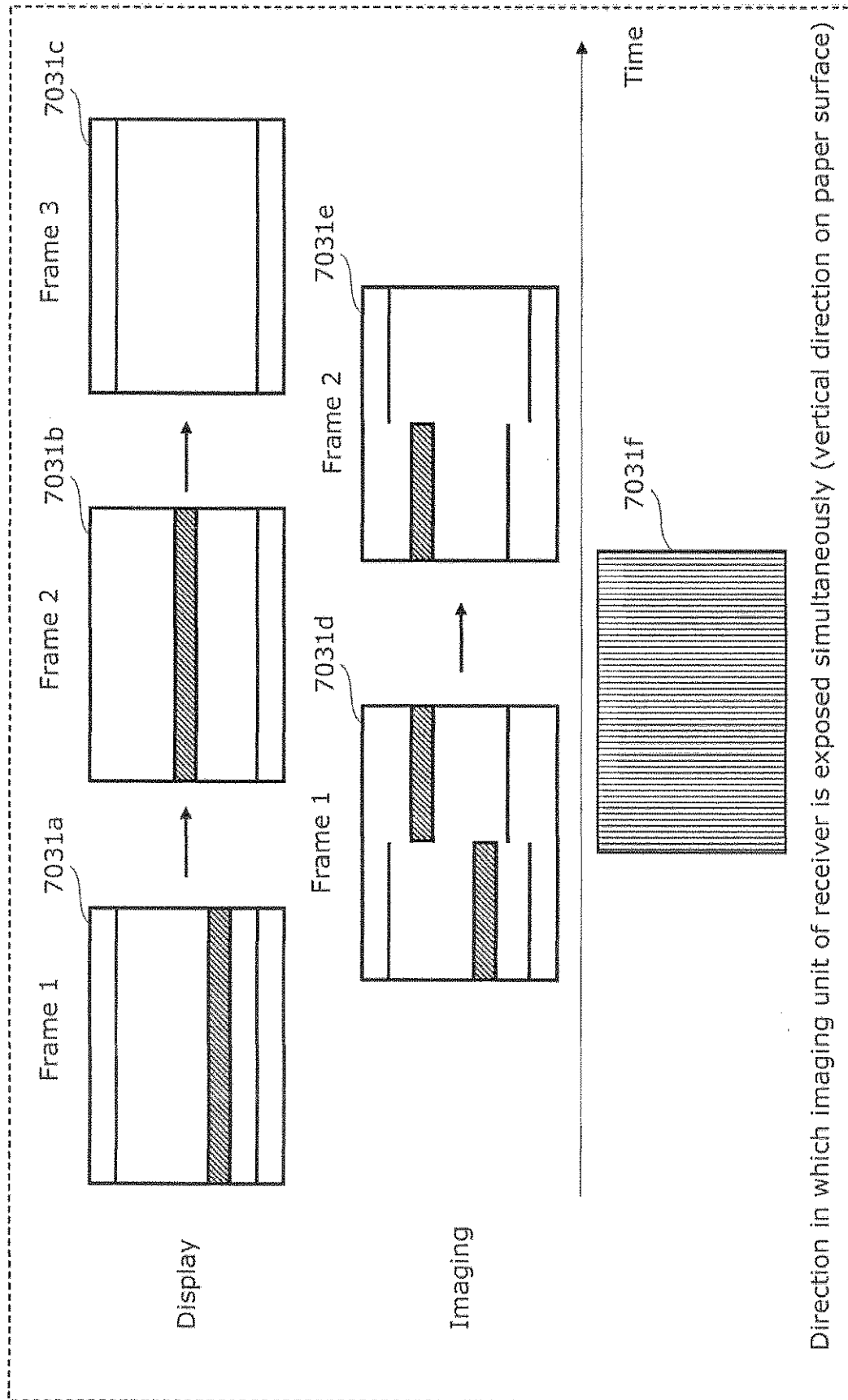


FIG. 263

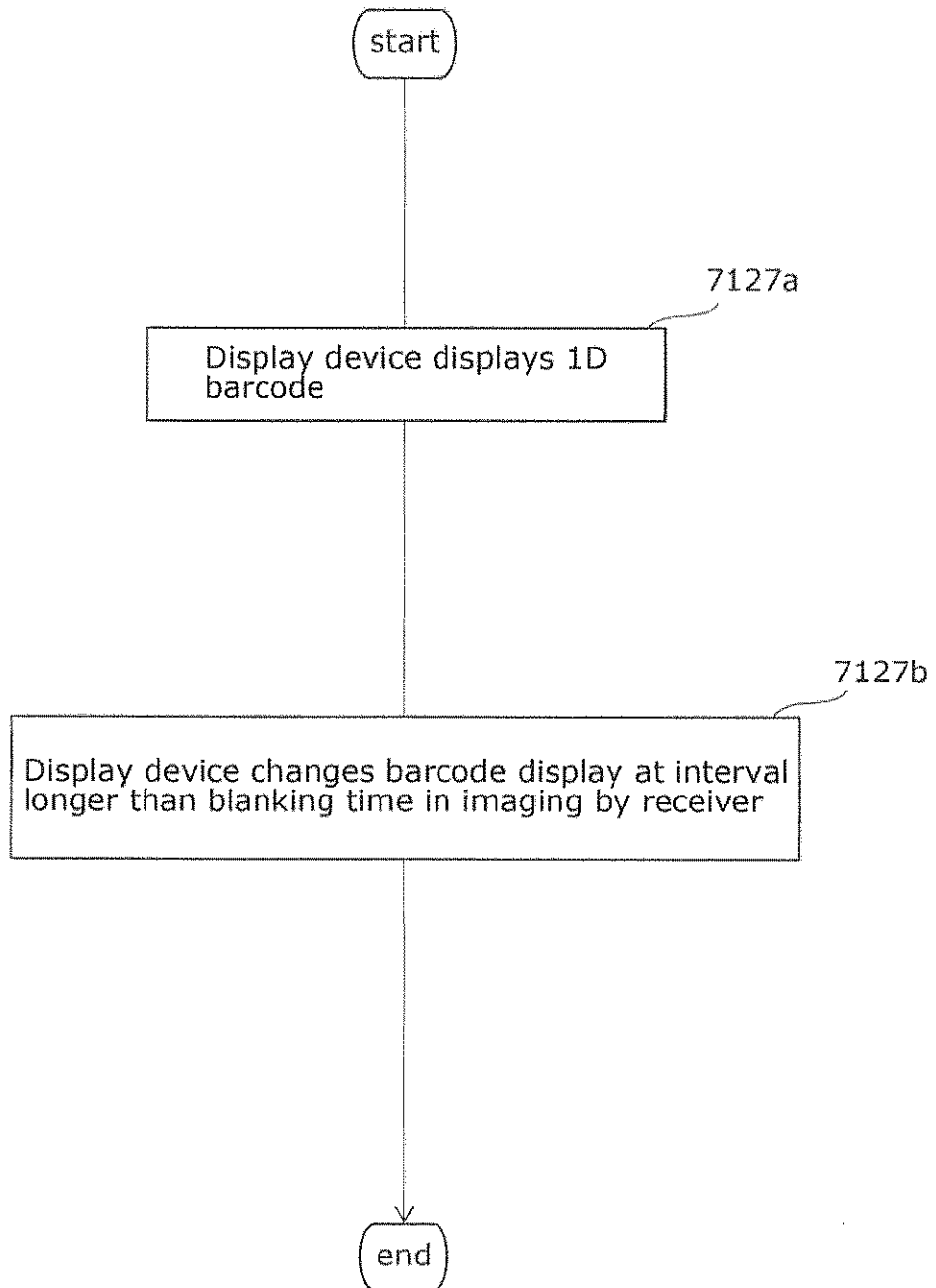


FIG. 264

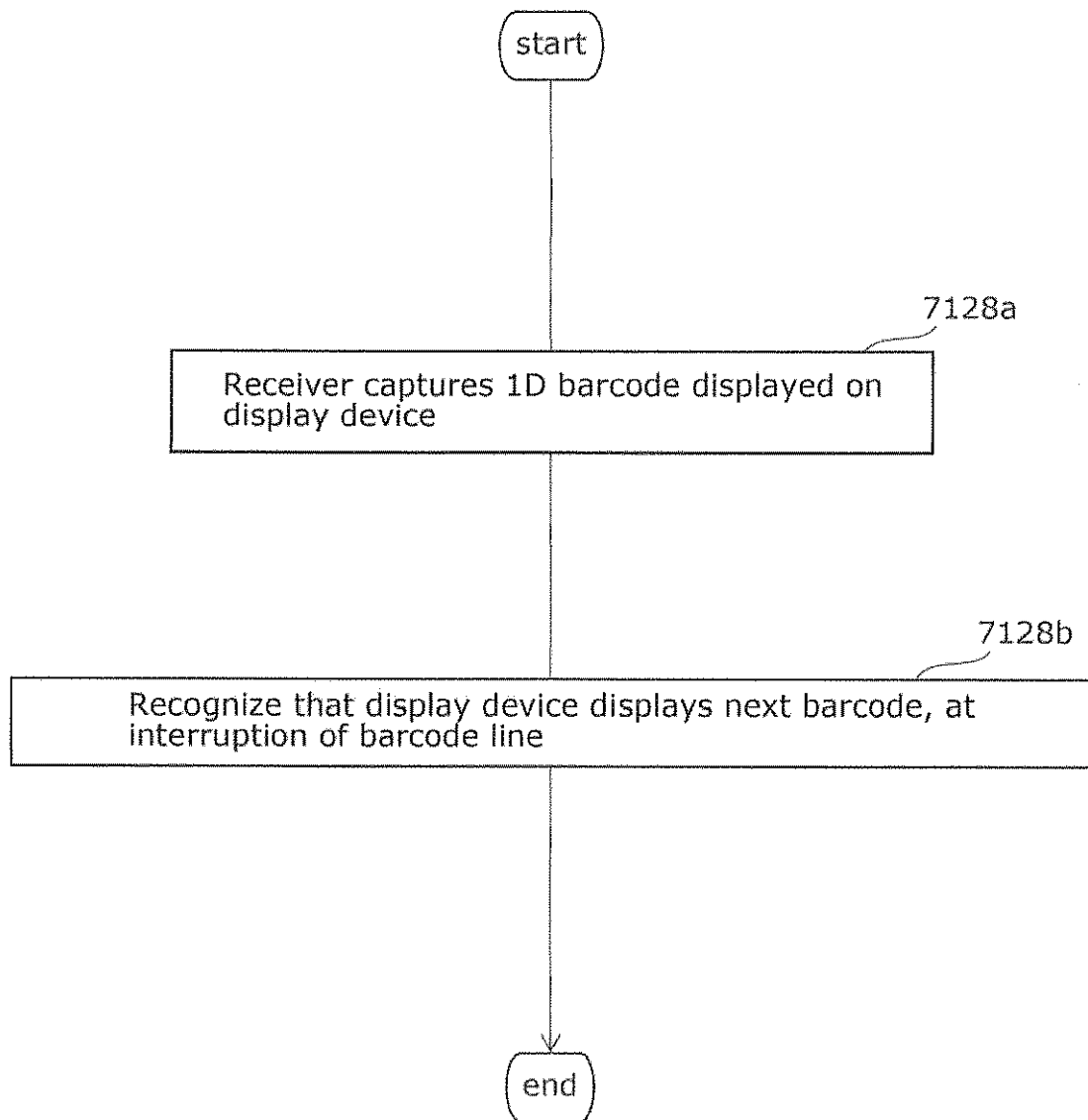


FIG. 265

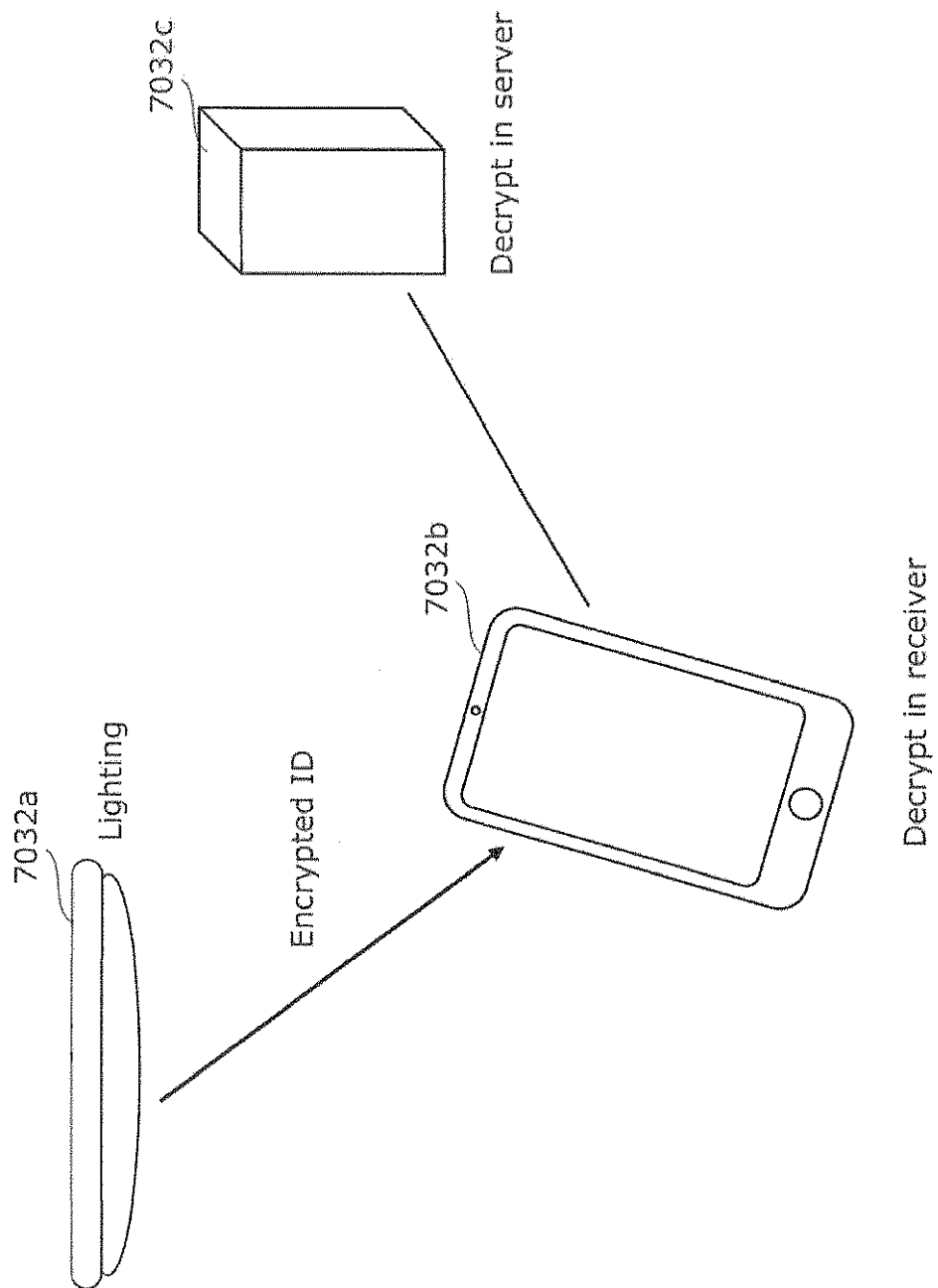


FIG. 266

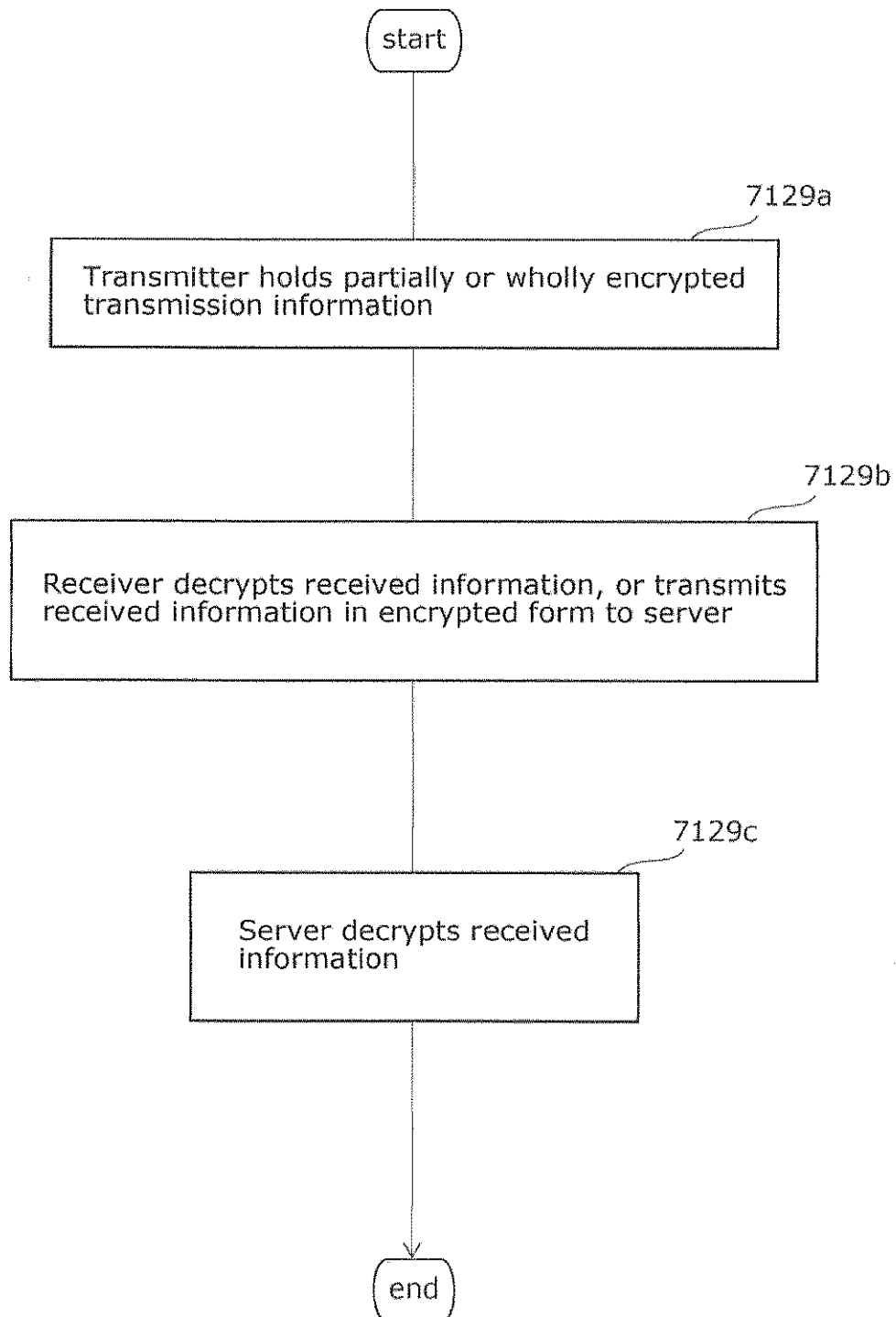
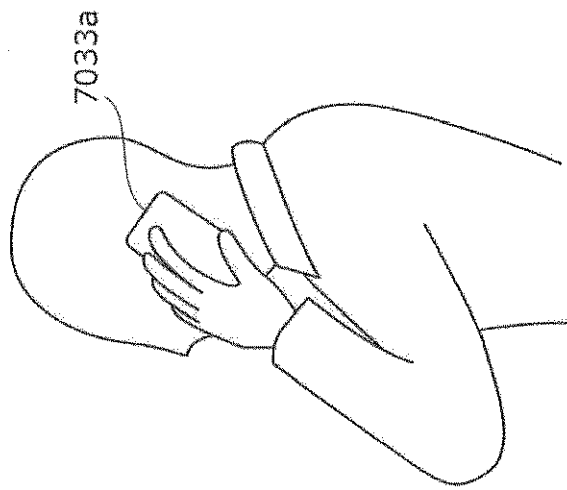


FIG. 267



Stop reception in the case where value of
illuminance sensor is low and receiver is estimated
to be in call state

FIG. 268

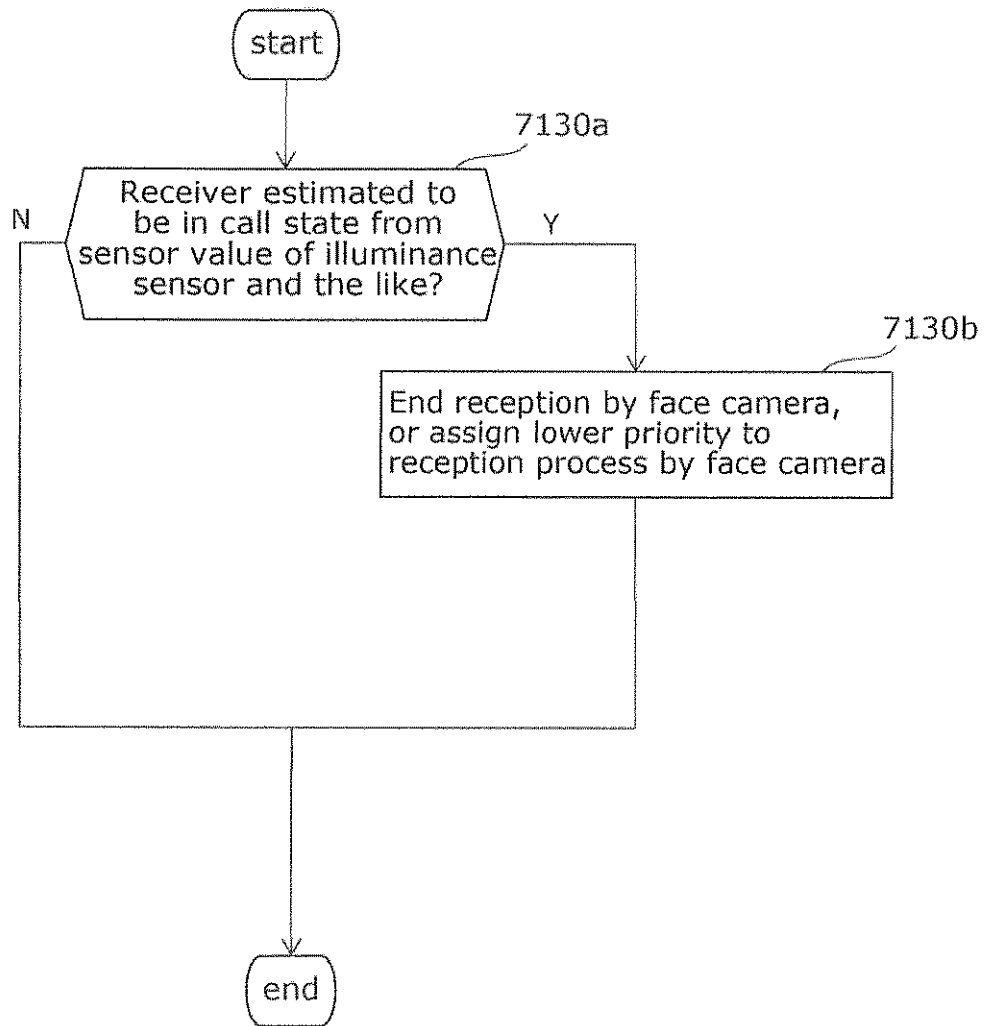
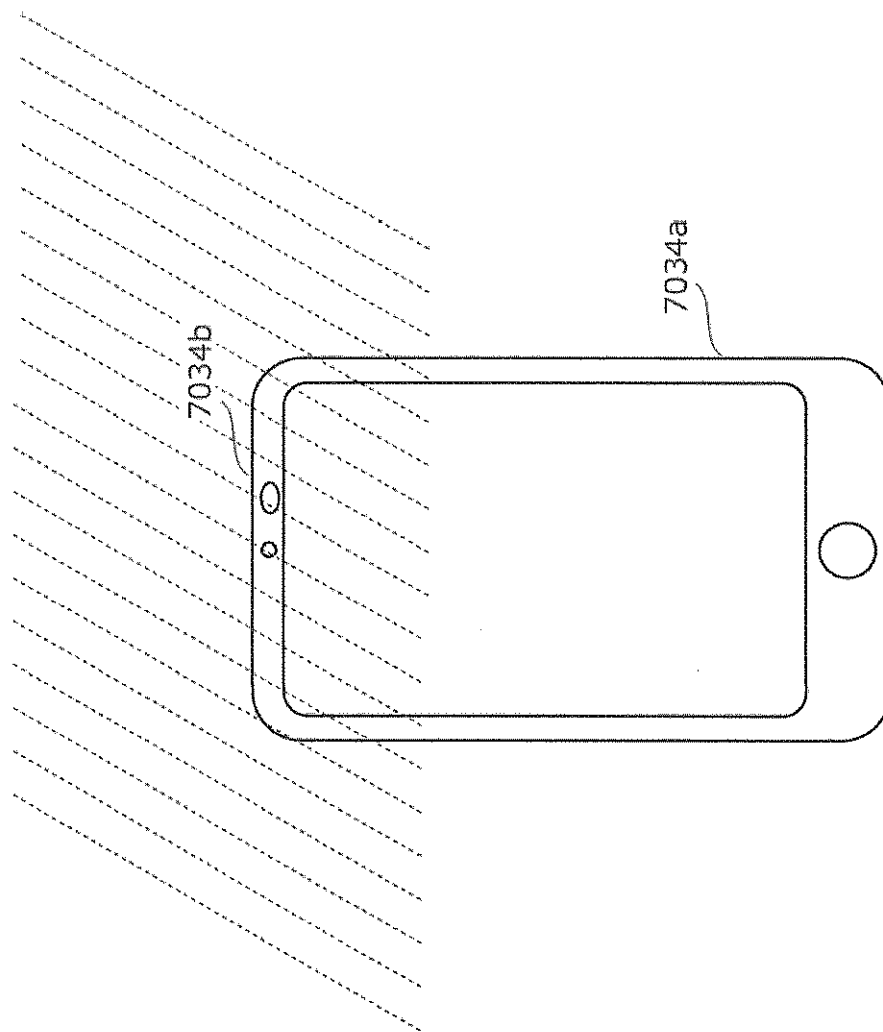


FIG. 269



Stop reception process by imaging device on illuminance sensor side or assign lower priority to reception process, in the case where measurement value of illuminance sensor is less than or equal to predetermined value

FIG. 270

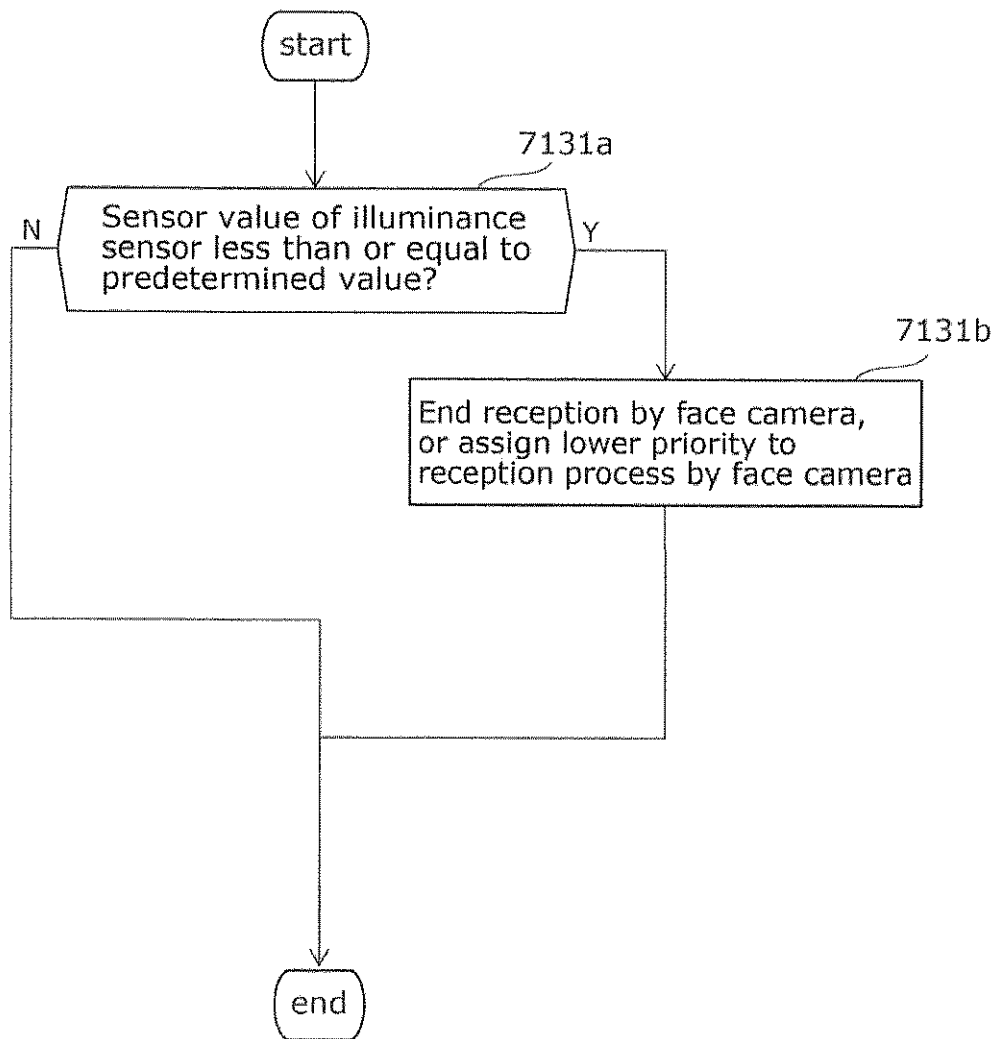


FIG. 271

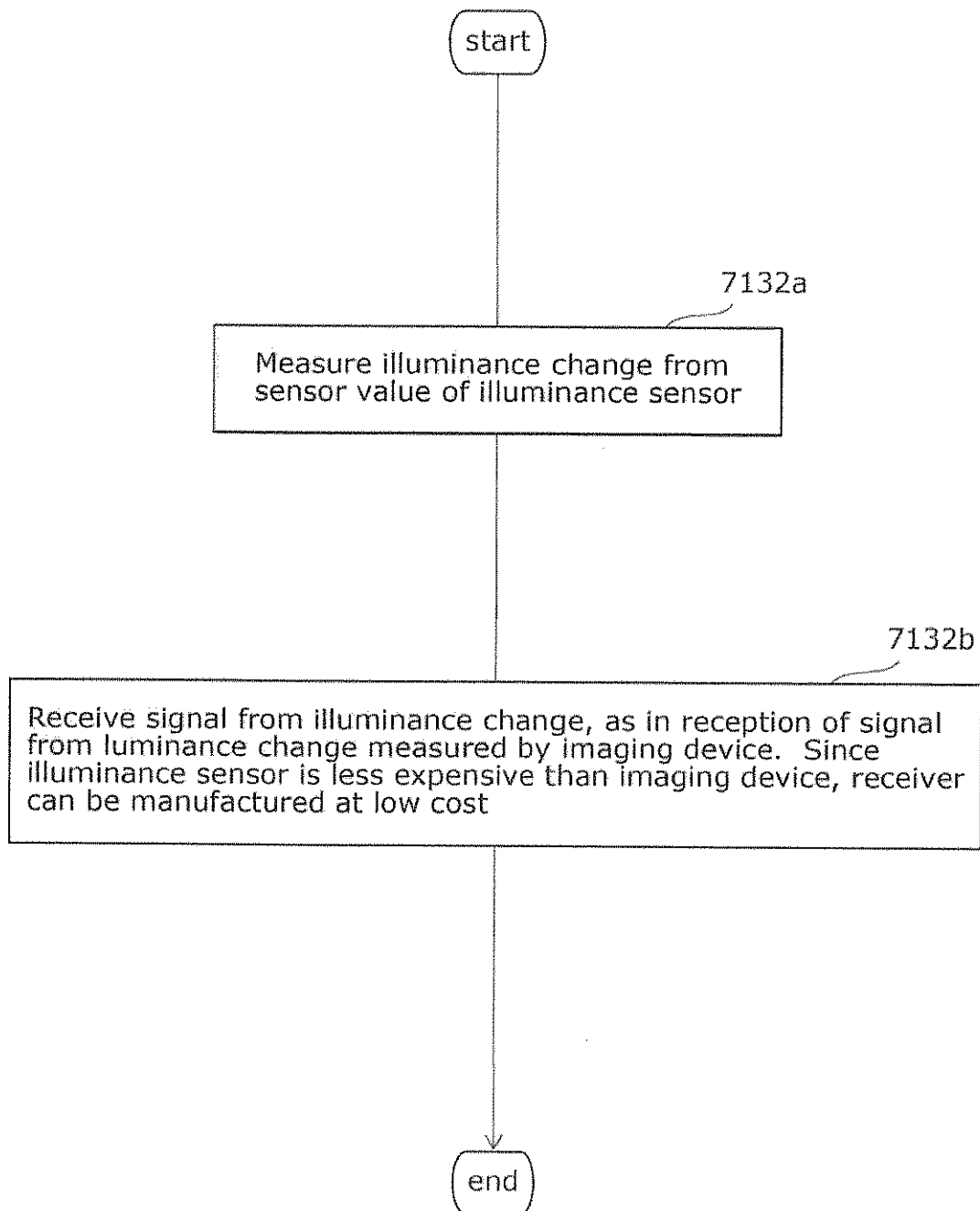


FIG. 272

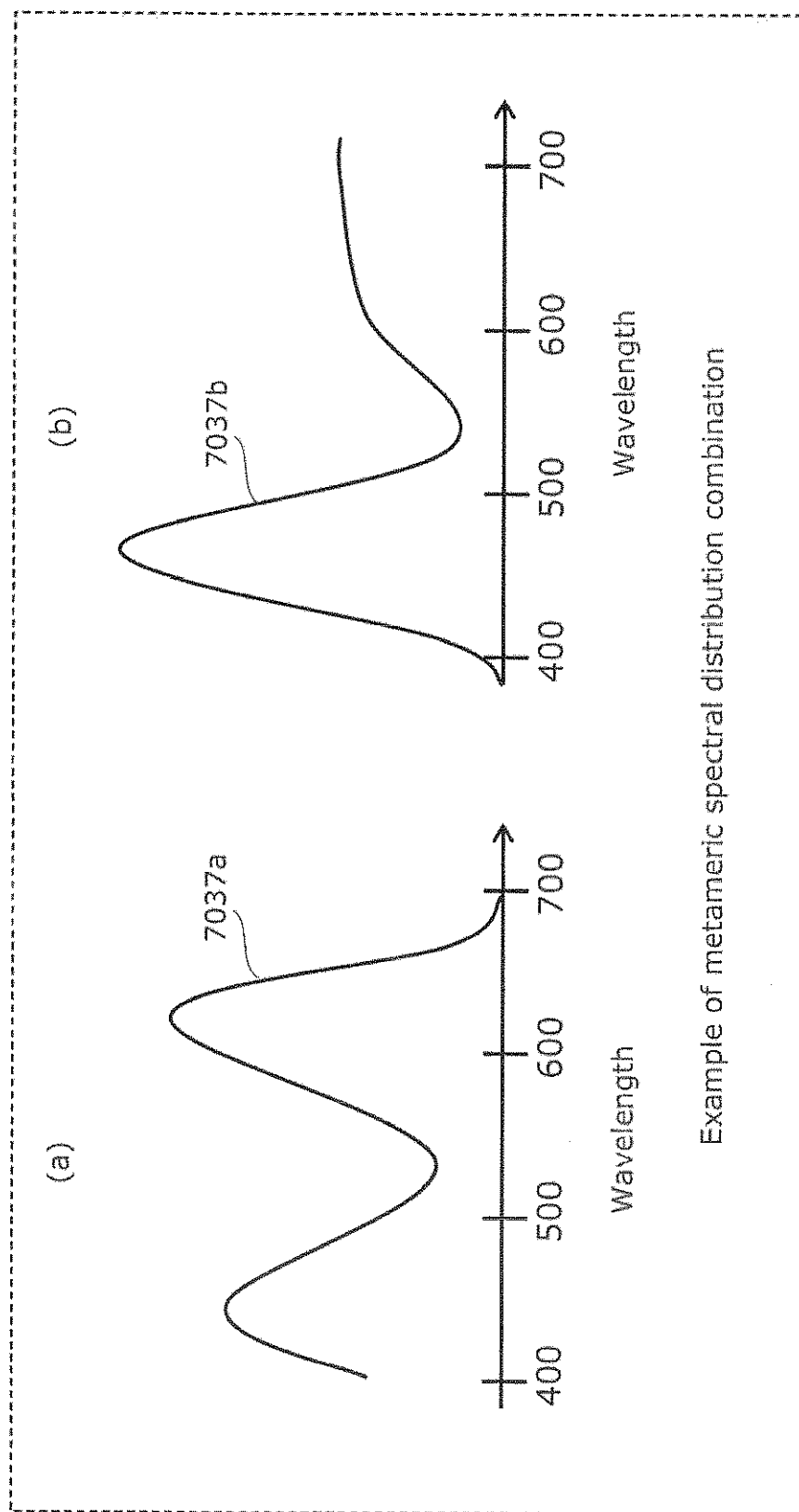


FIG. 273

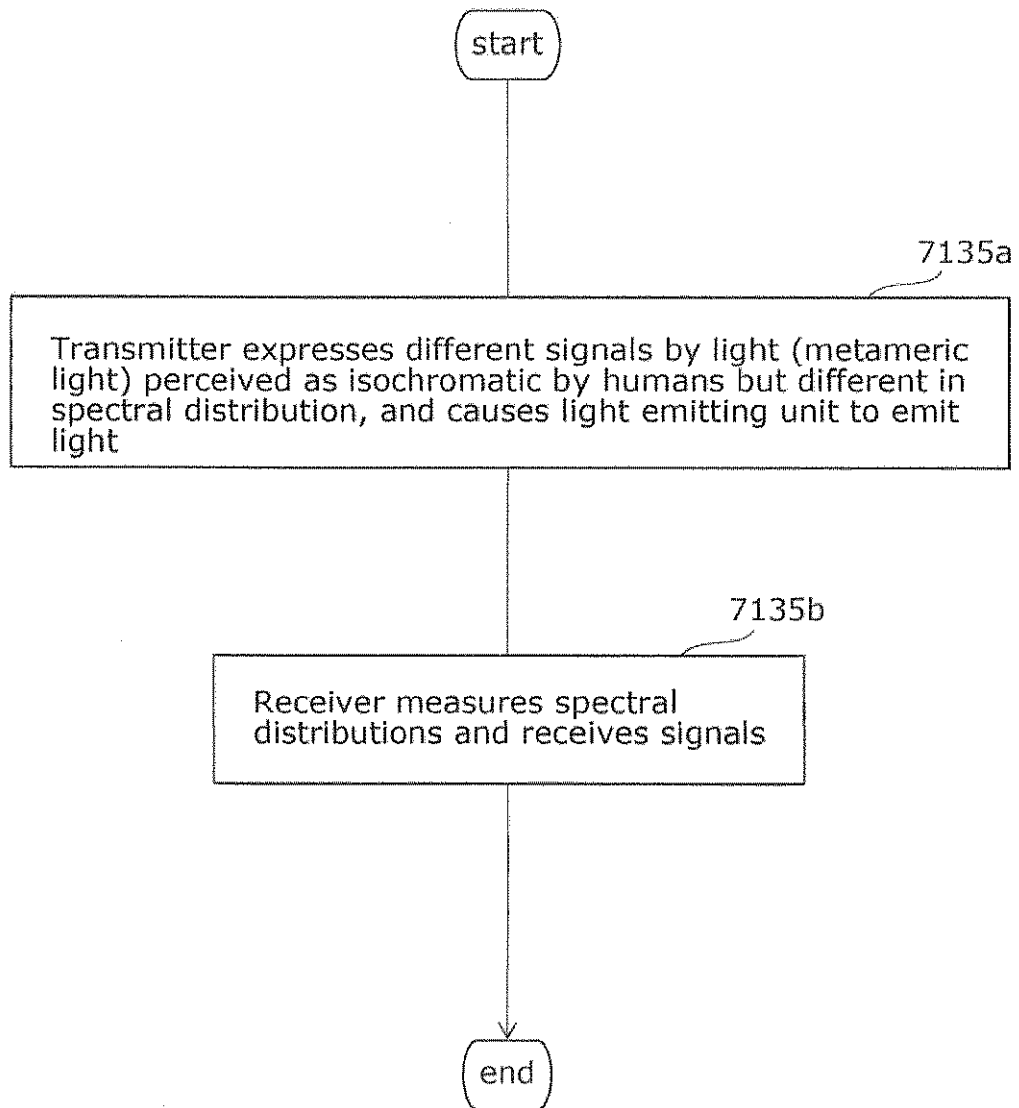


FIG. 274

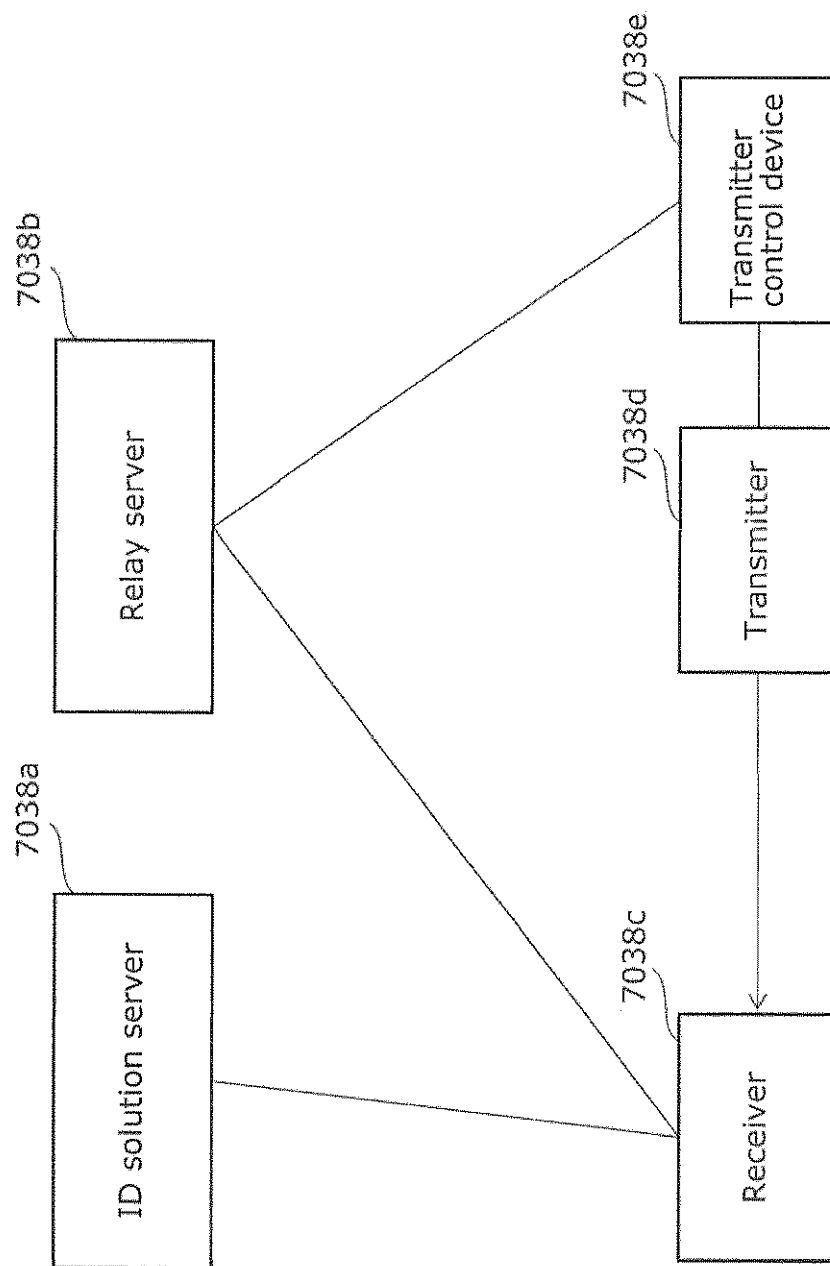


FIG. 275

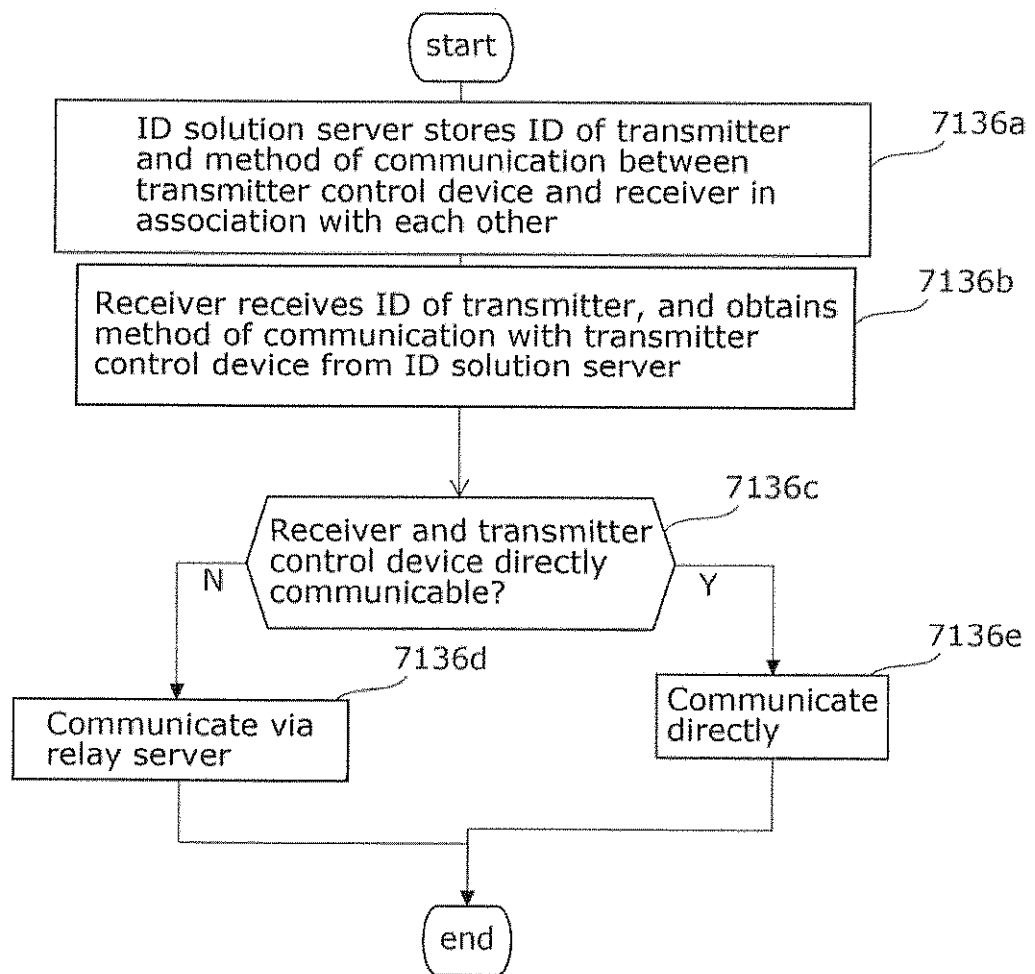


FIG. 276

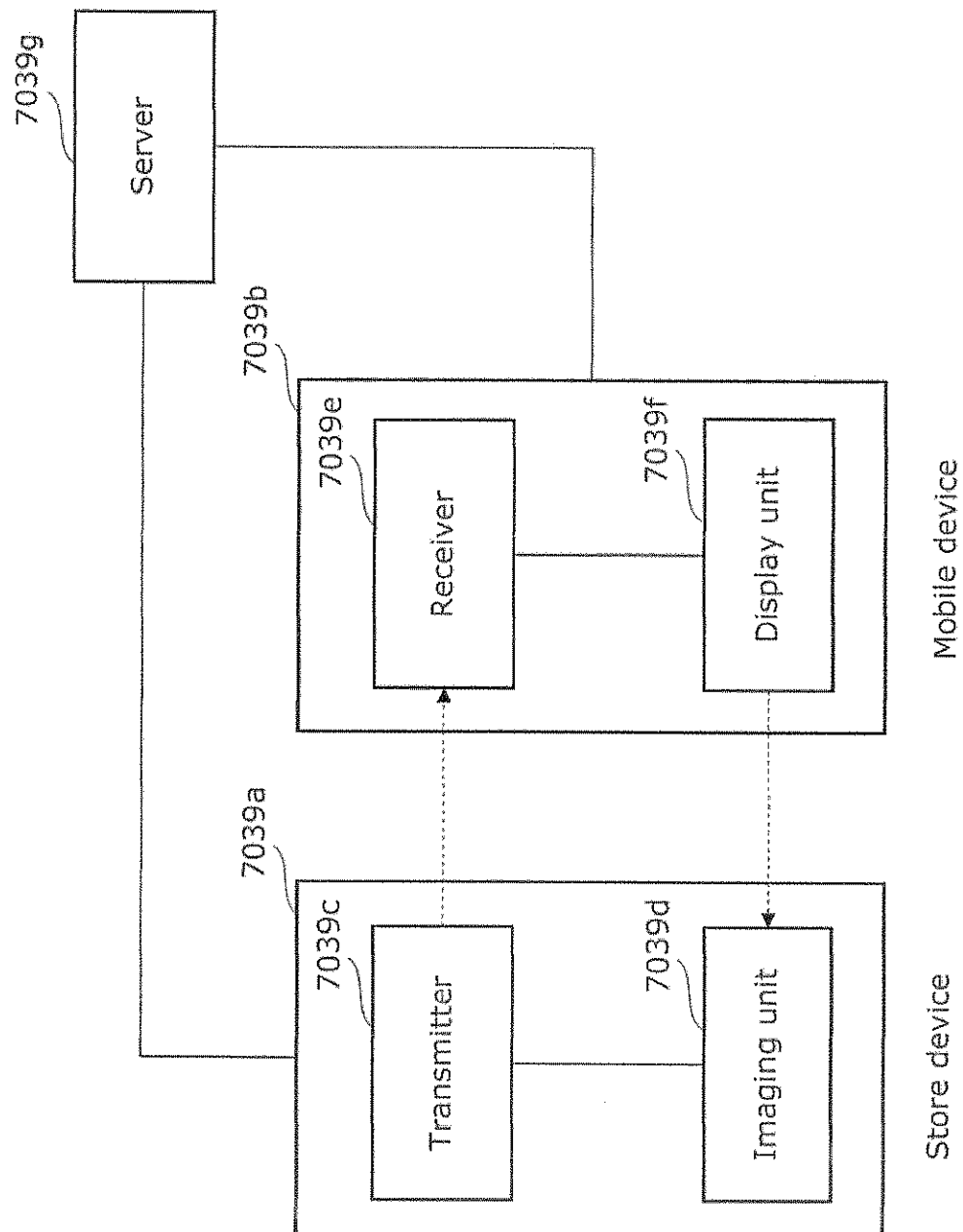


FIG. 277

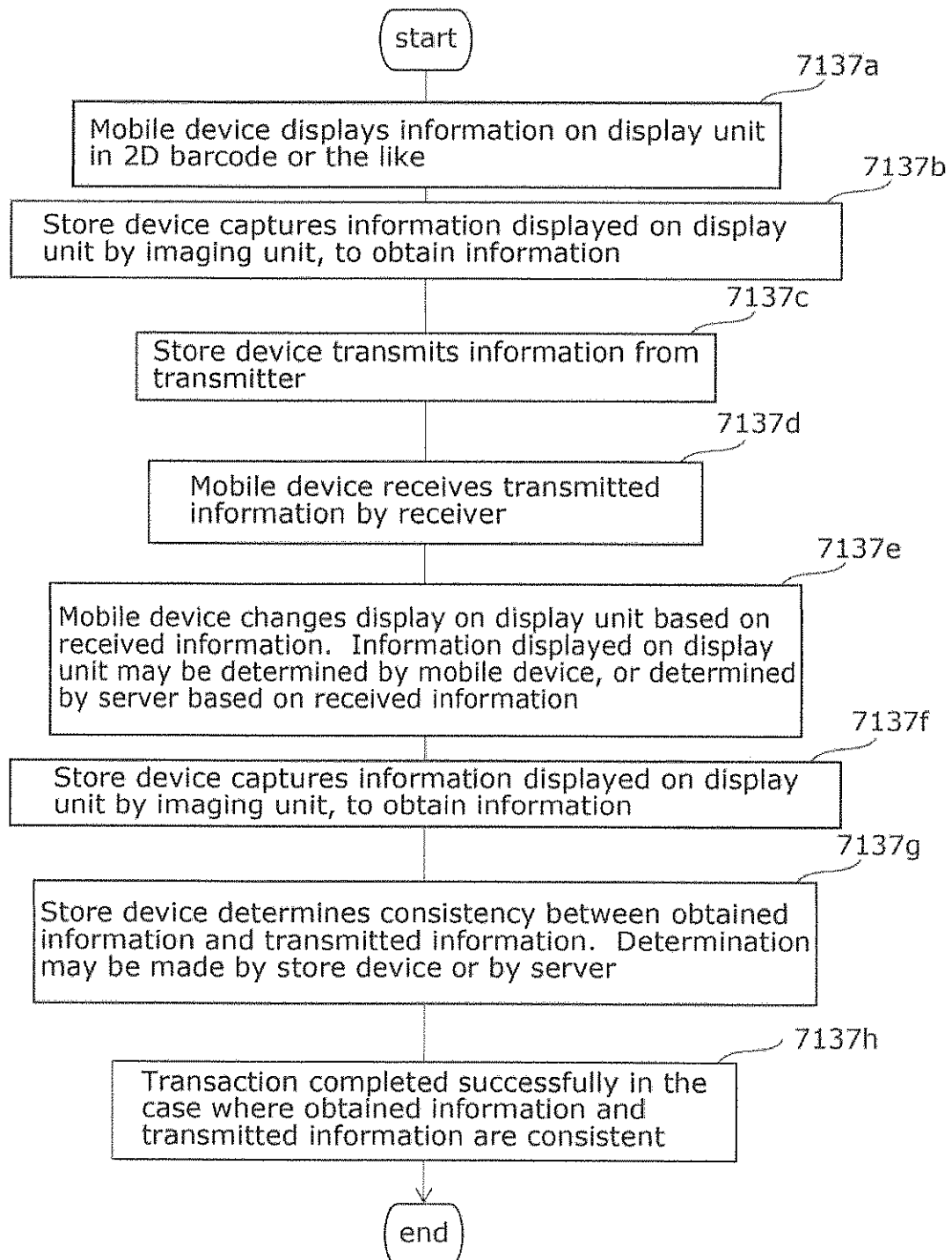


FIG. 278

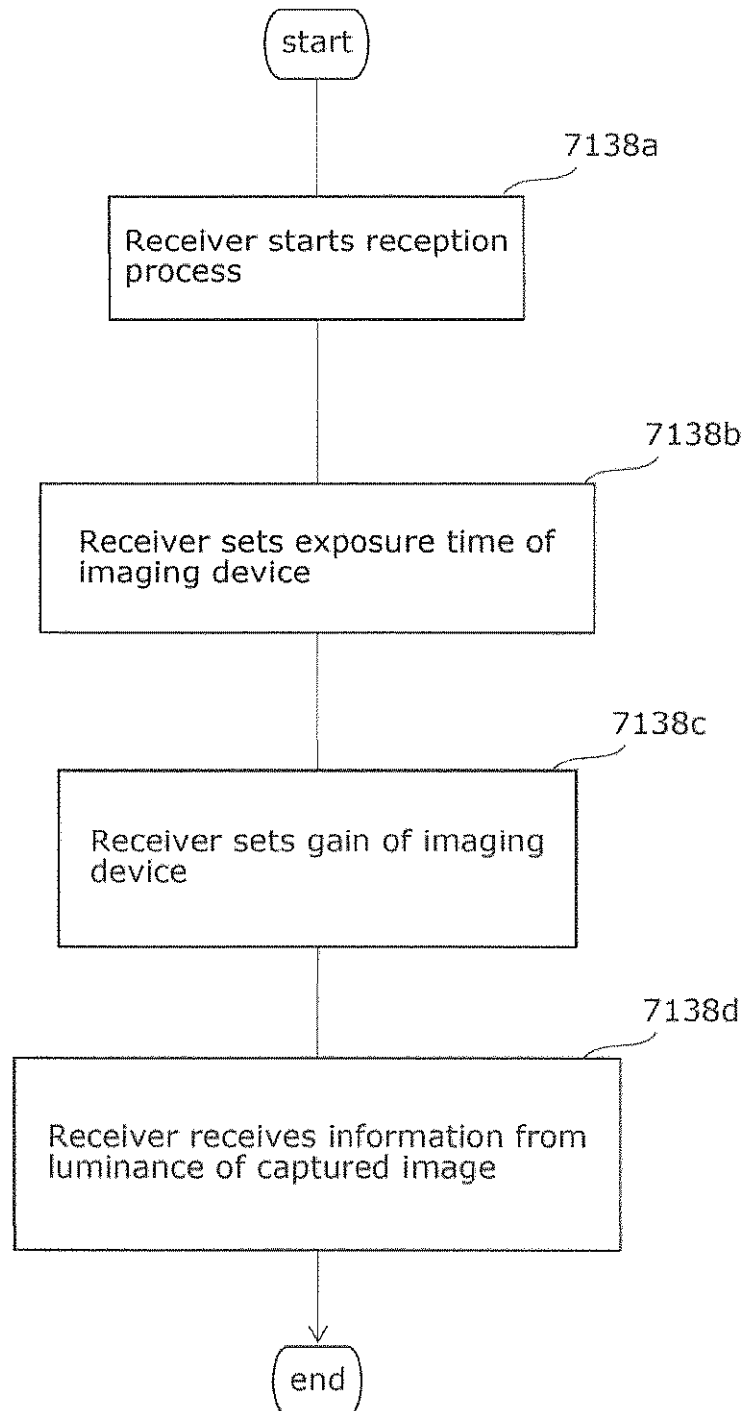


FIG. 279

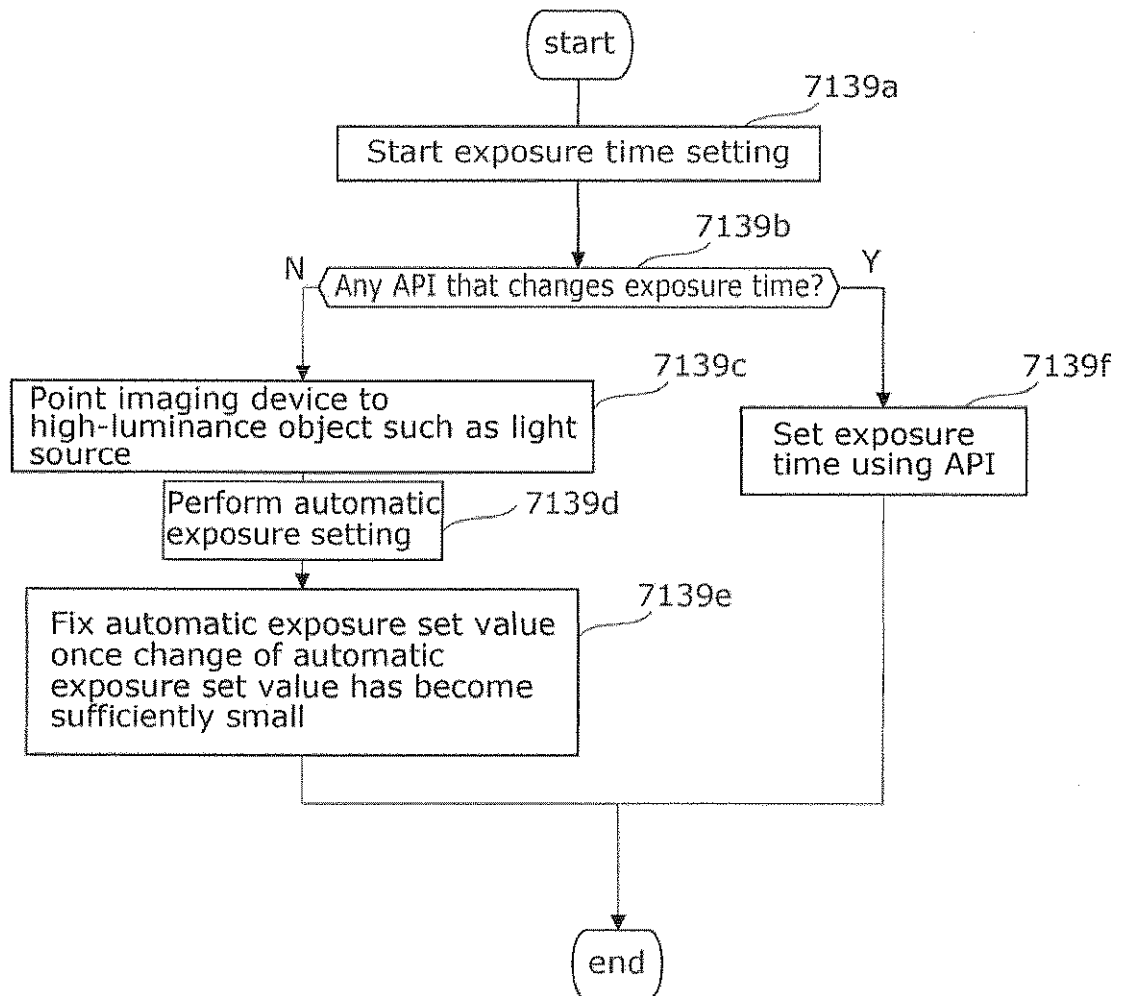


FIG. 280

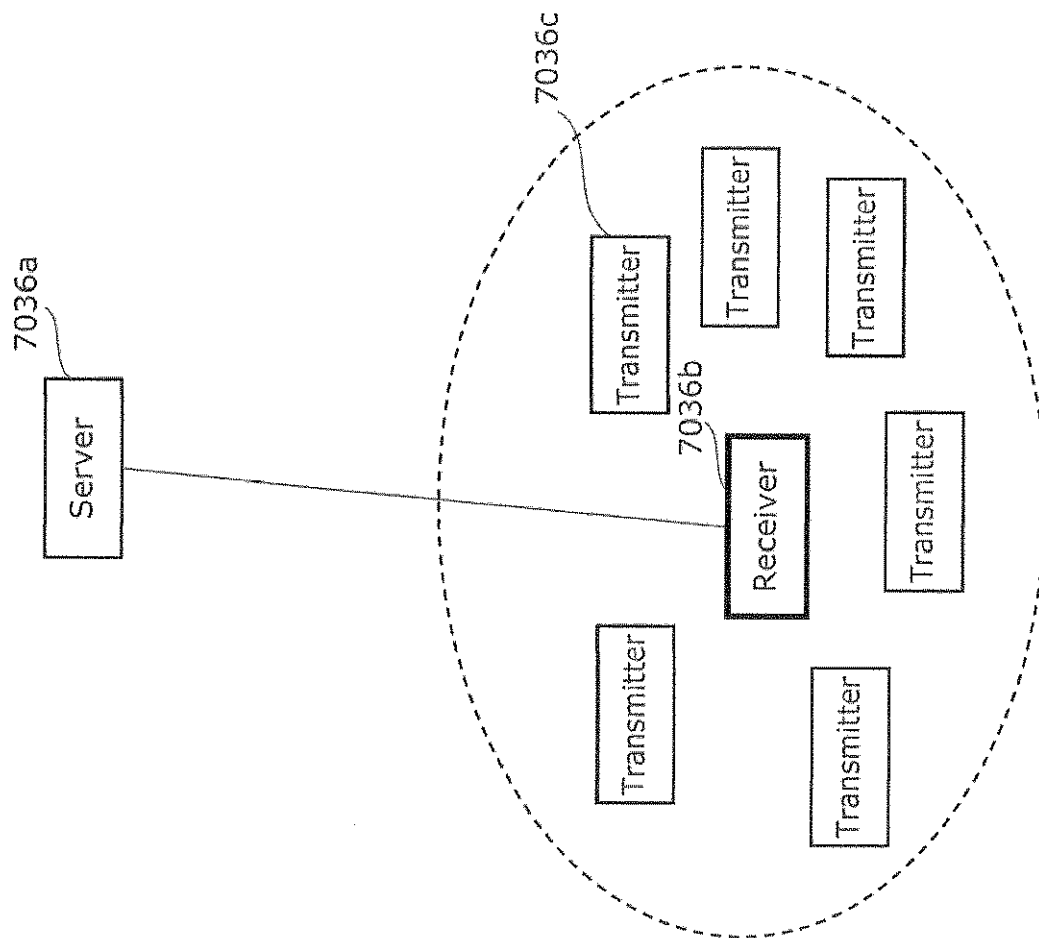


FIG. 281

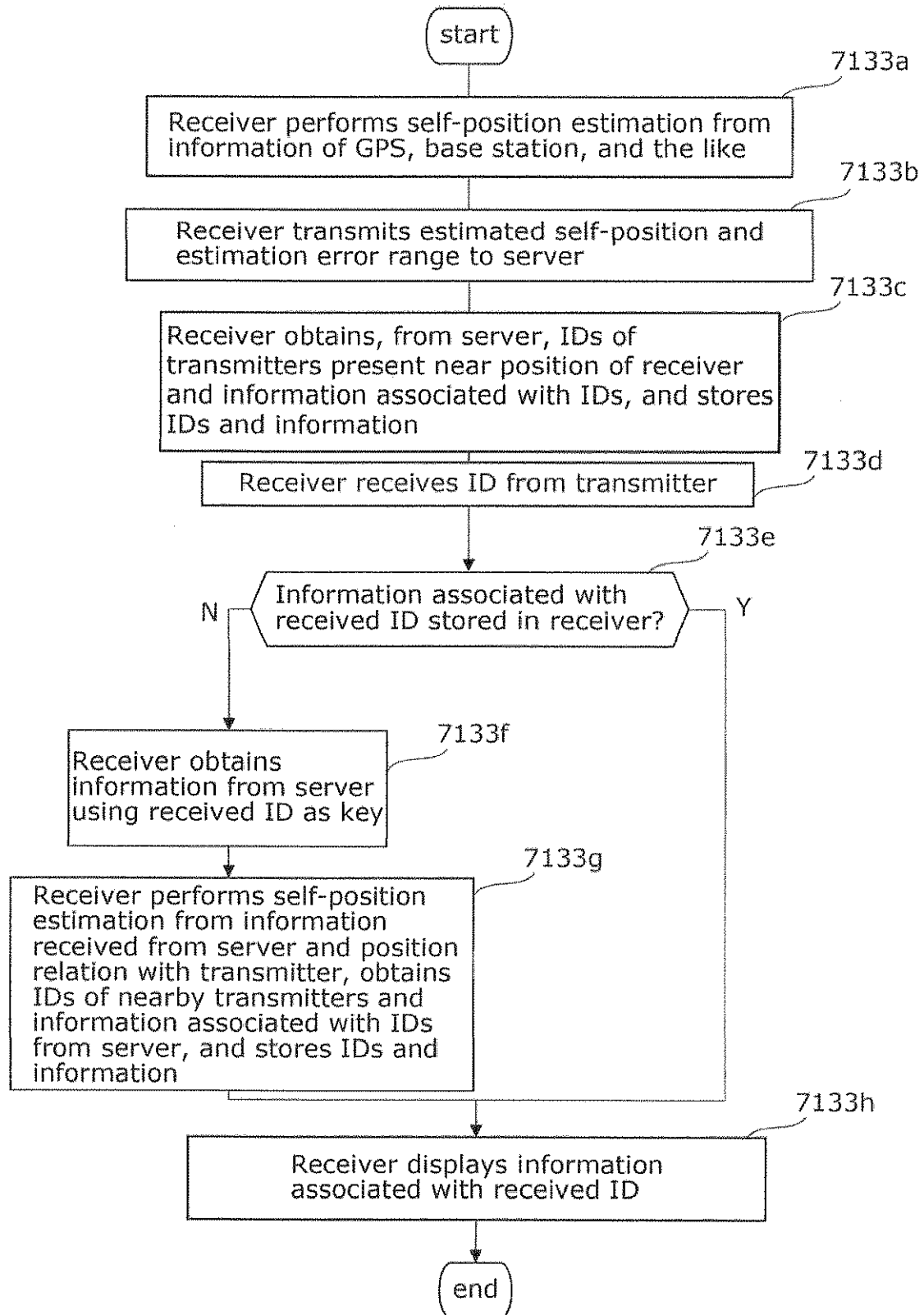


FIG. 282

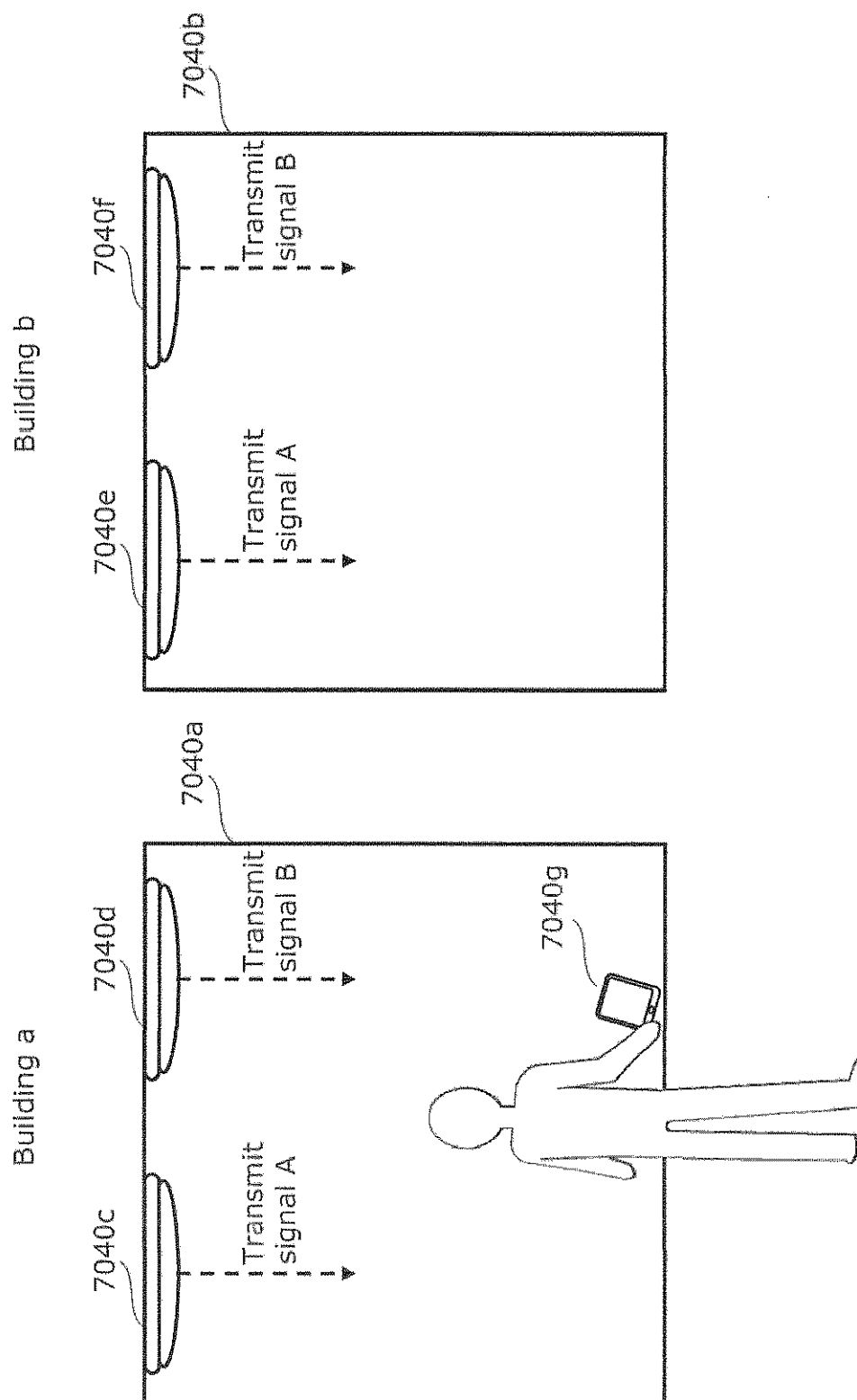


FIG. 283

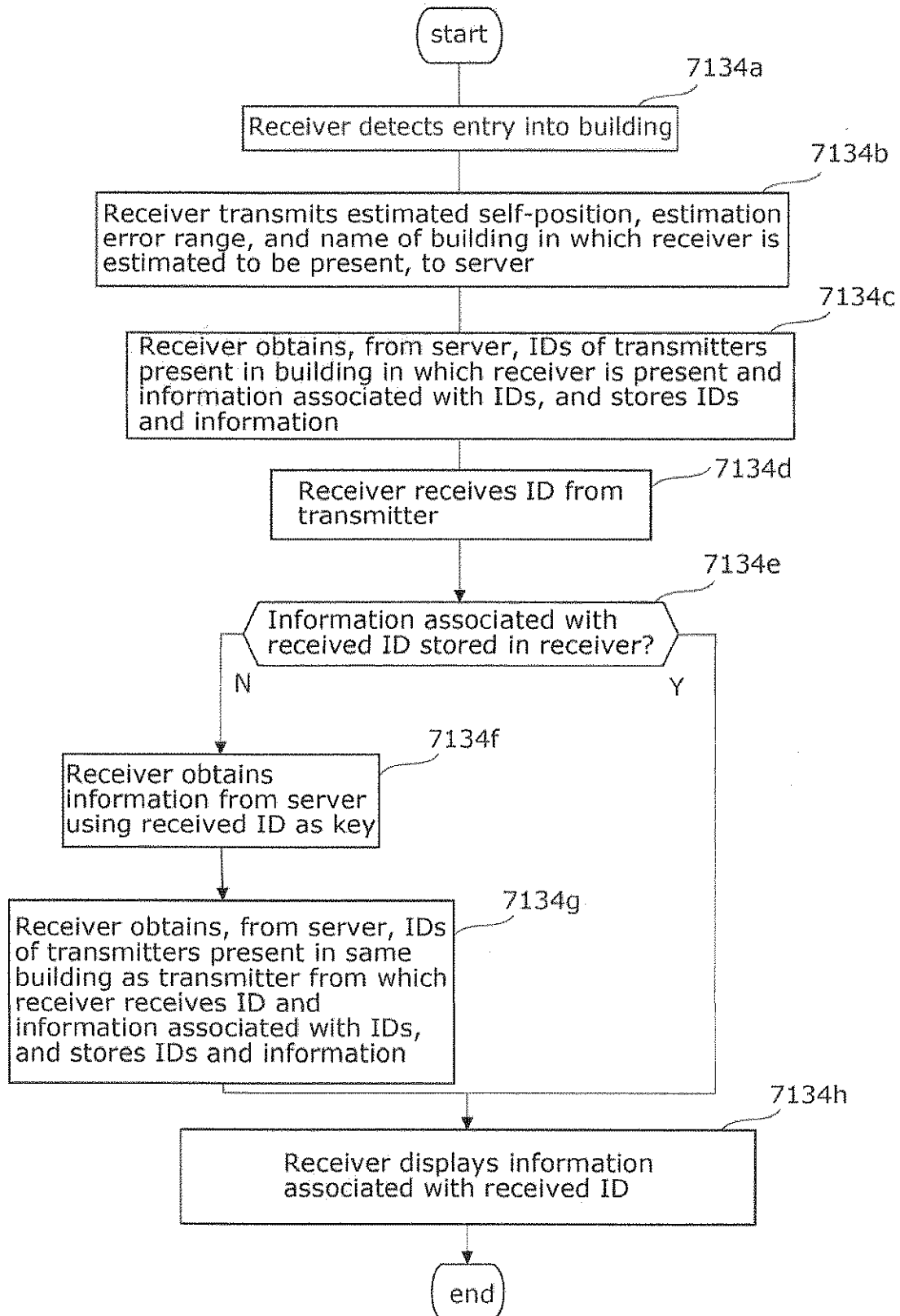


FIG. 284

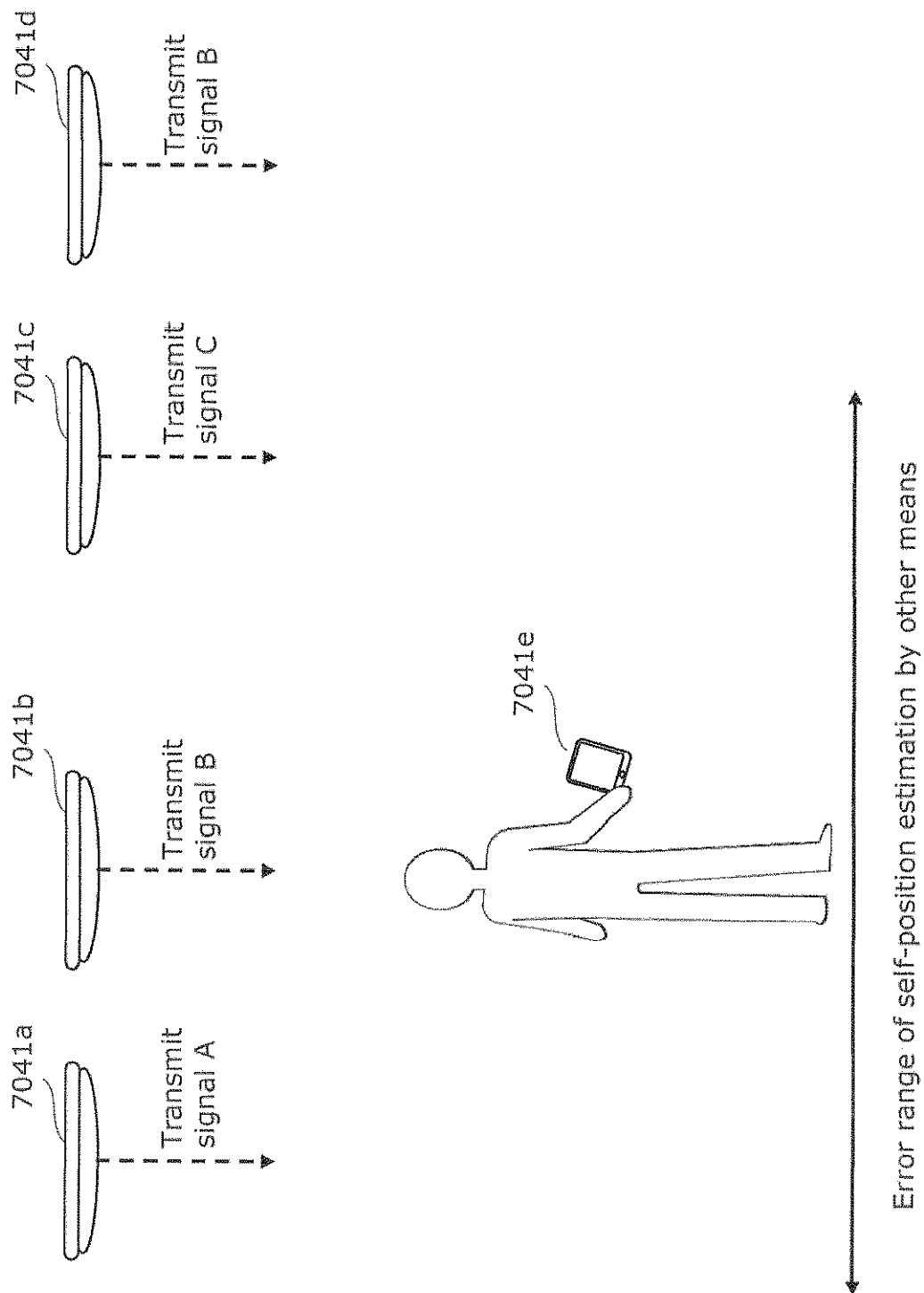


FIG. 285

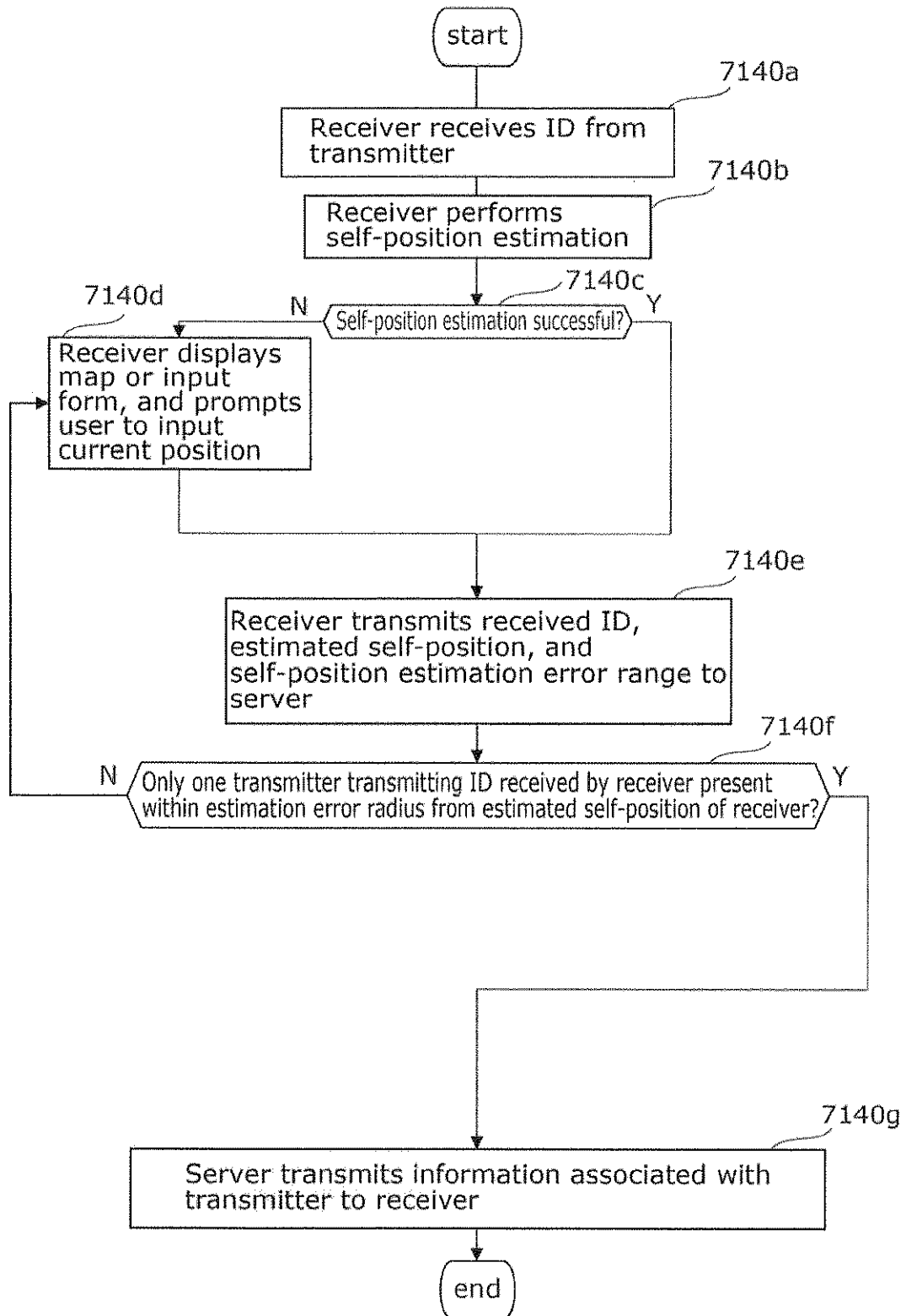


FIG. 286

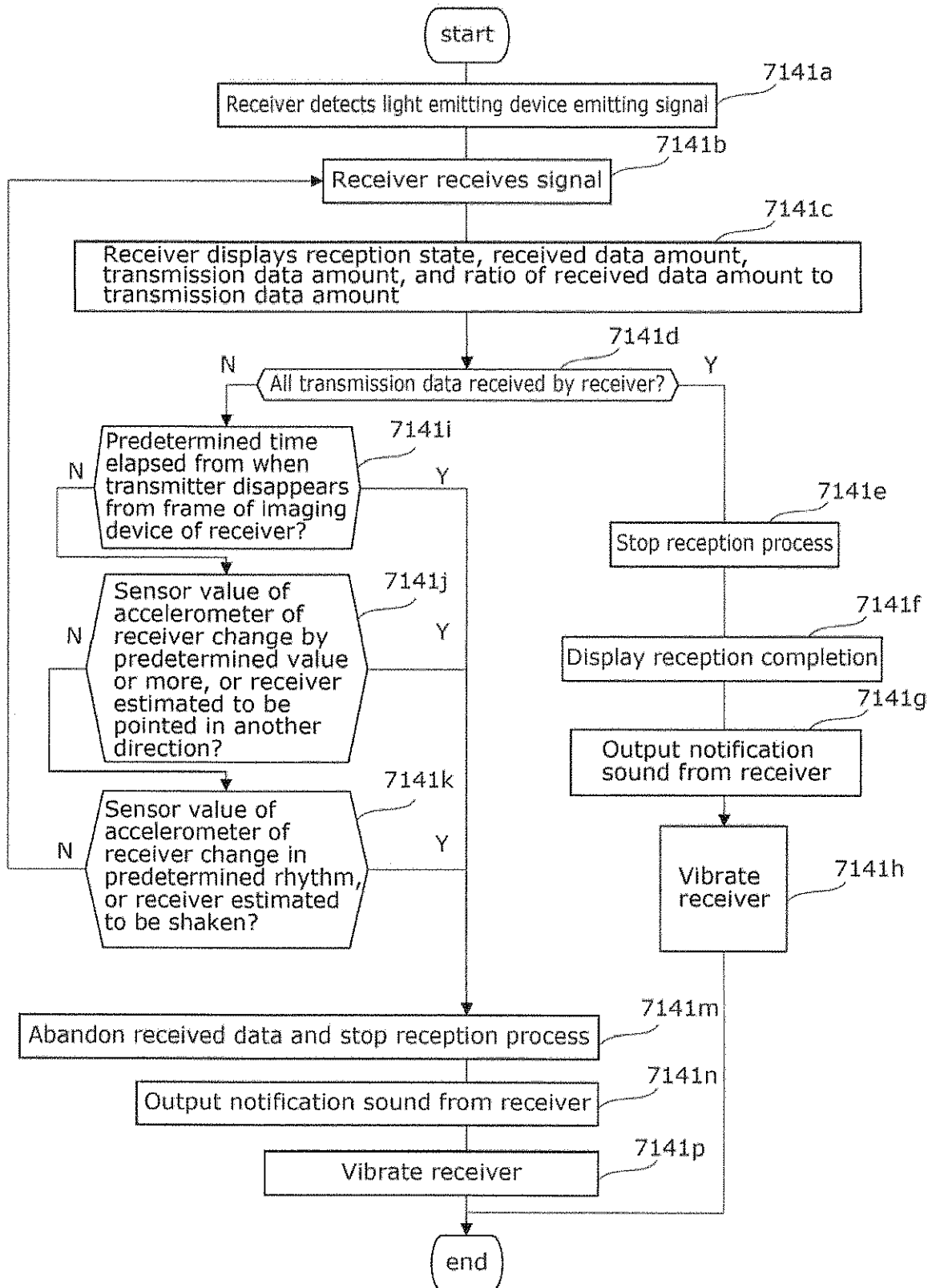


FIG. 287A

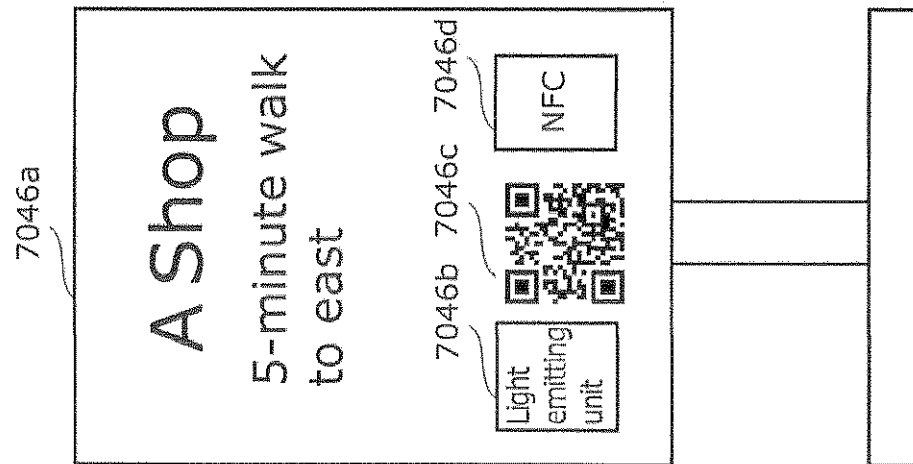


FIG. 287B

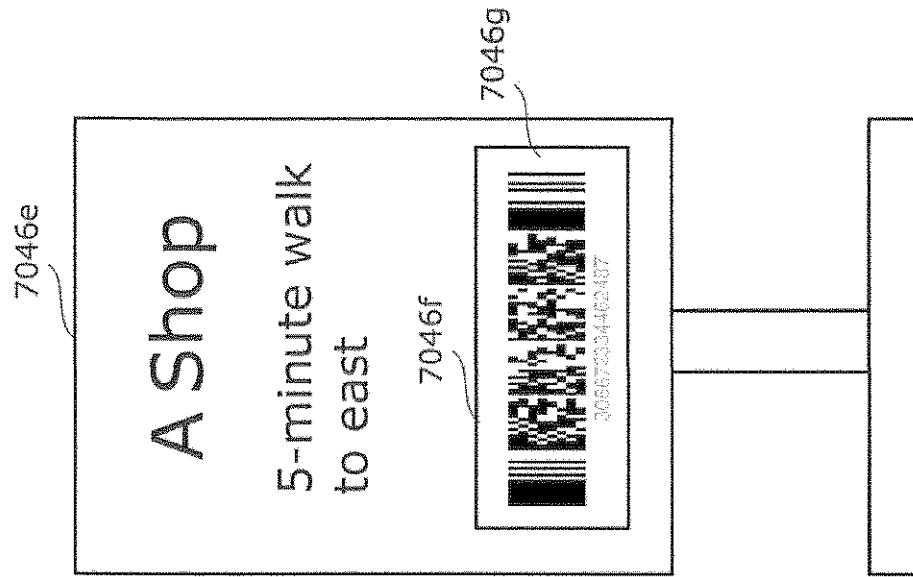


FIG. 288

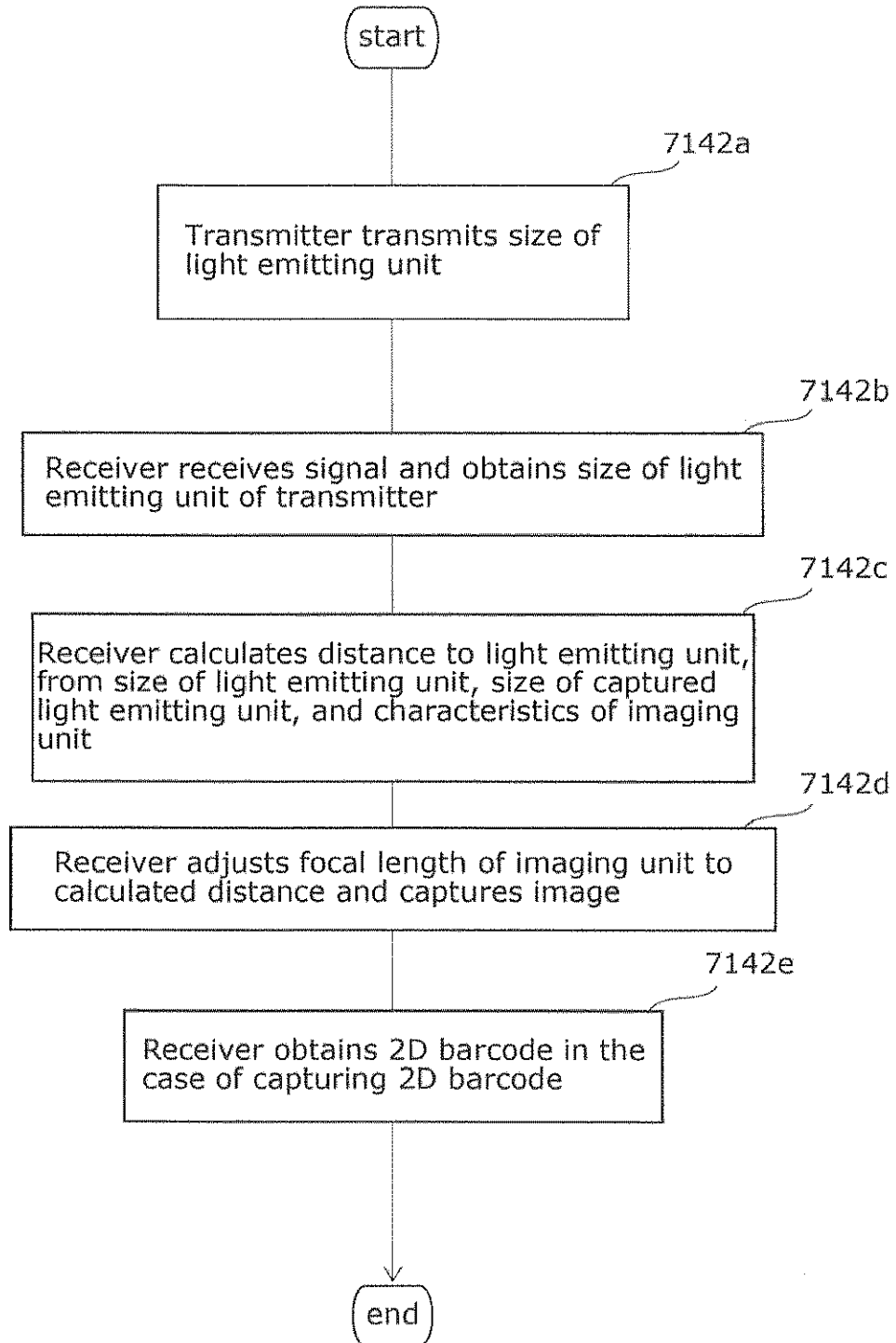


FIG. 289

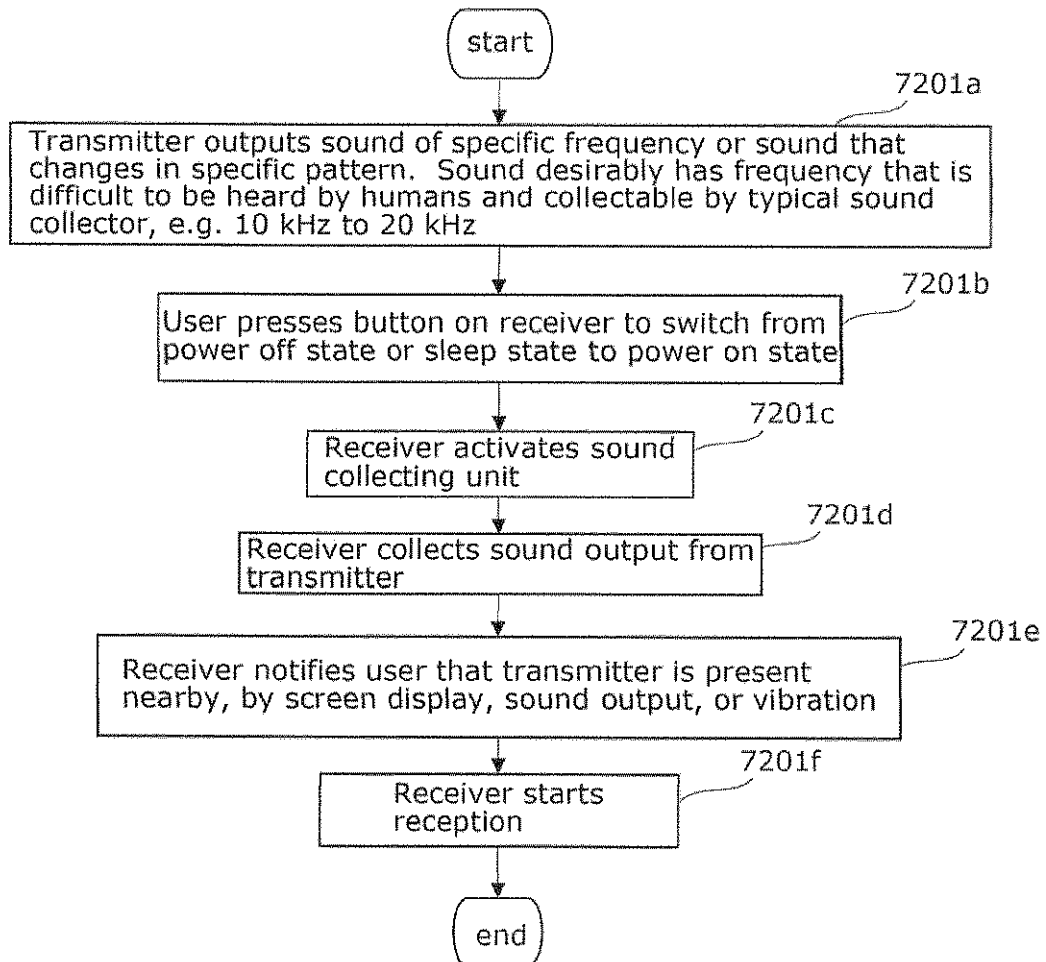


FIG. 290

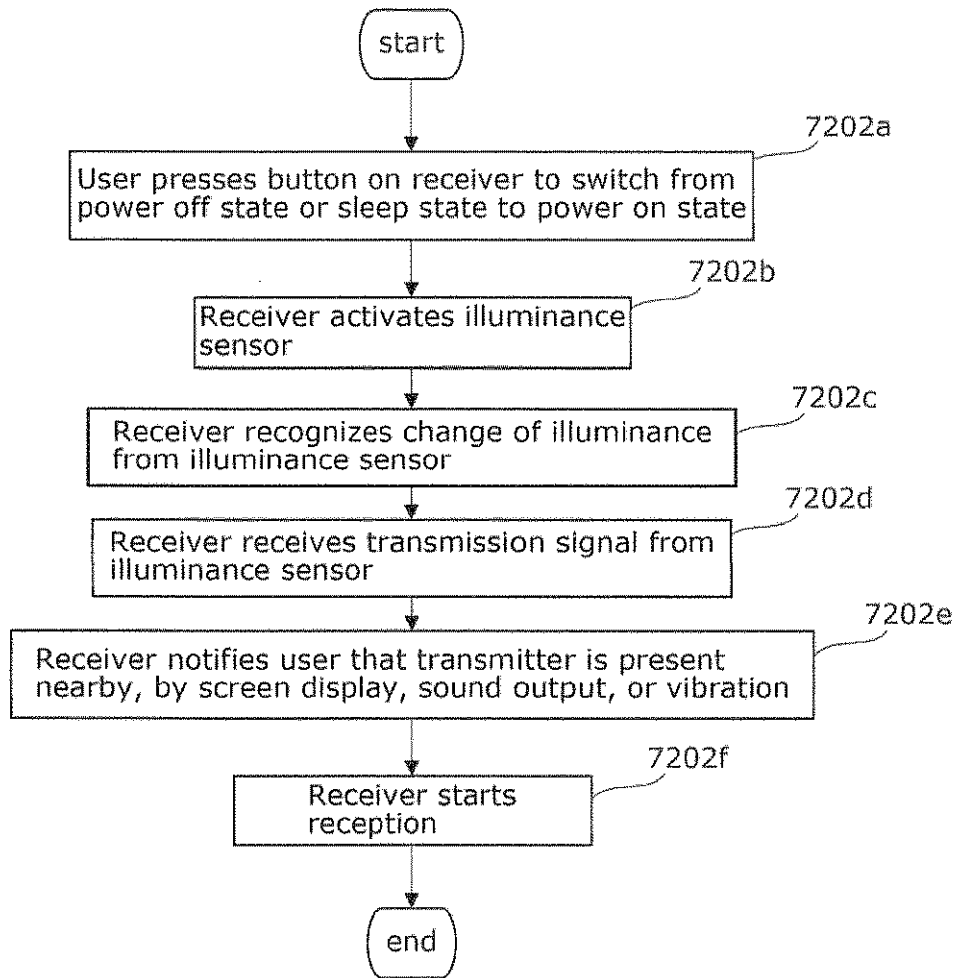


FIG. 291

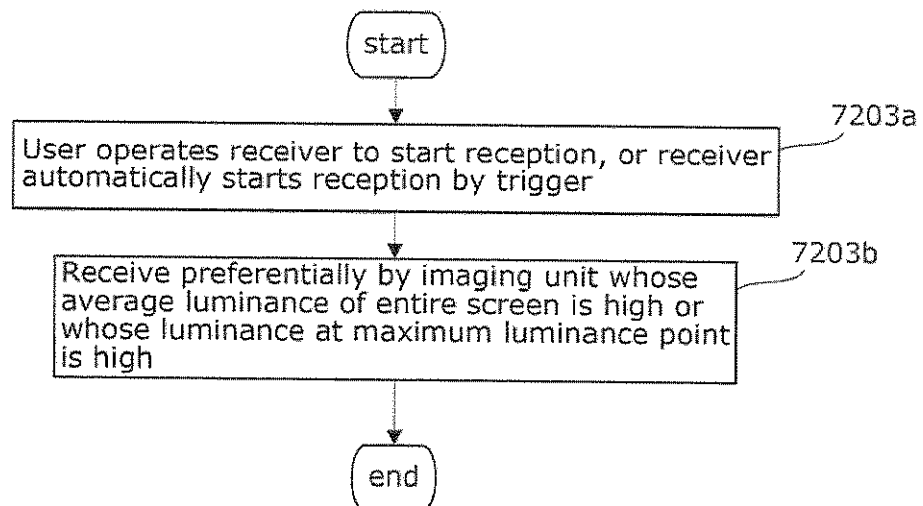


FIG. 292

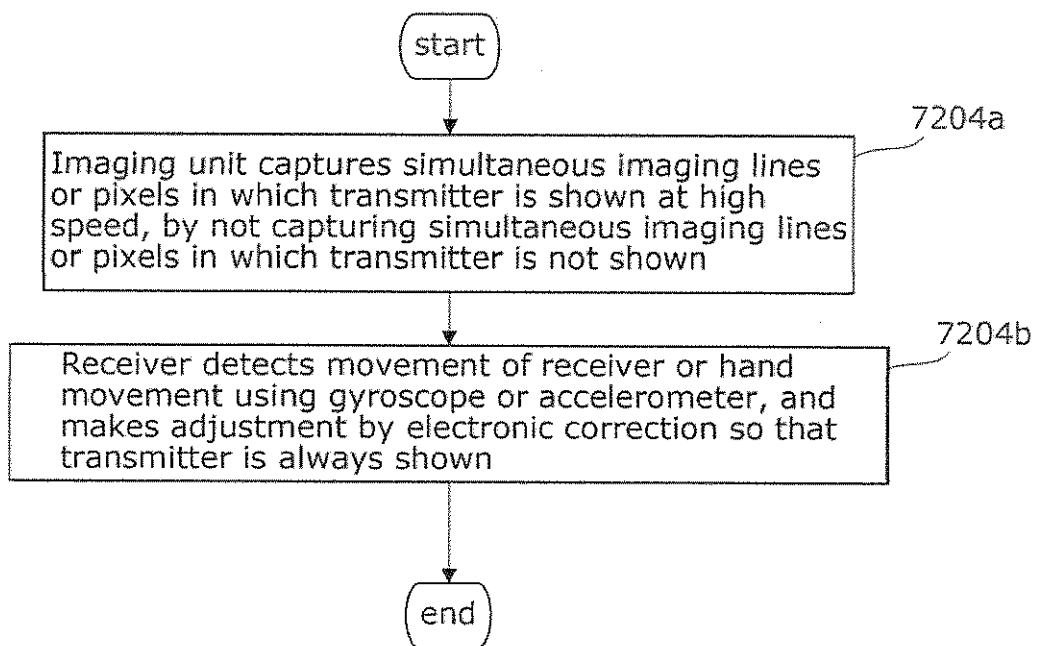


FIG. 293

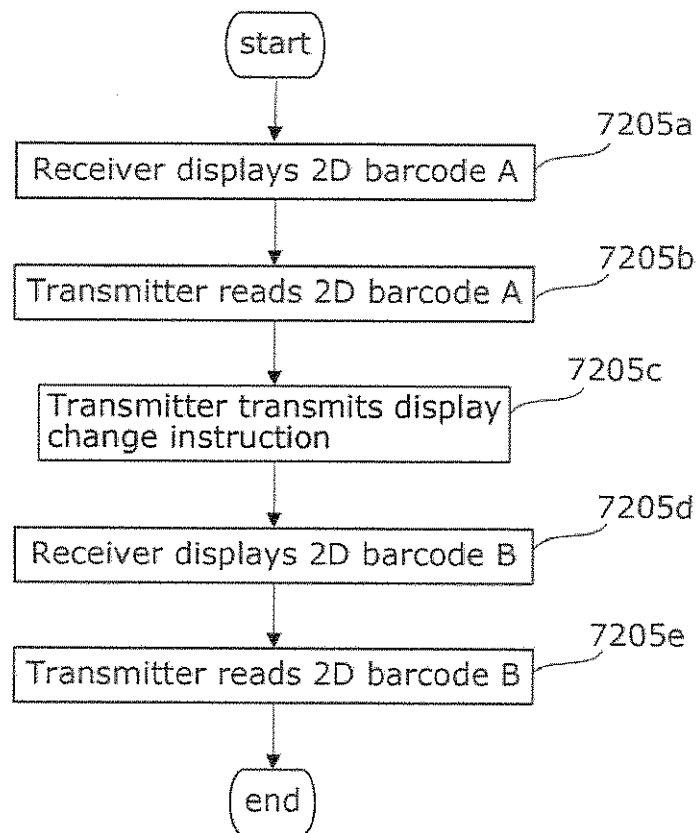


FIG. 294

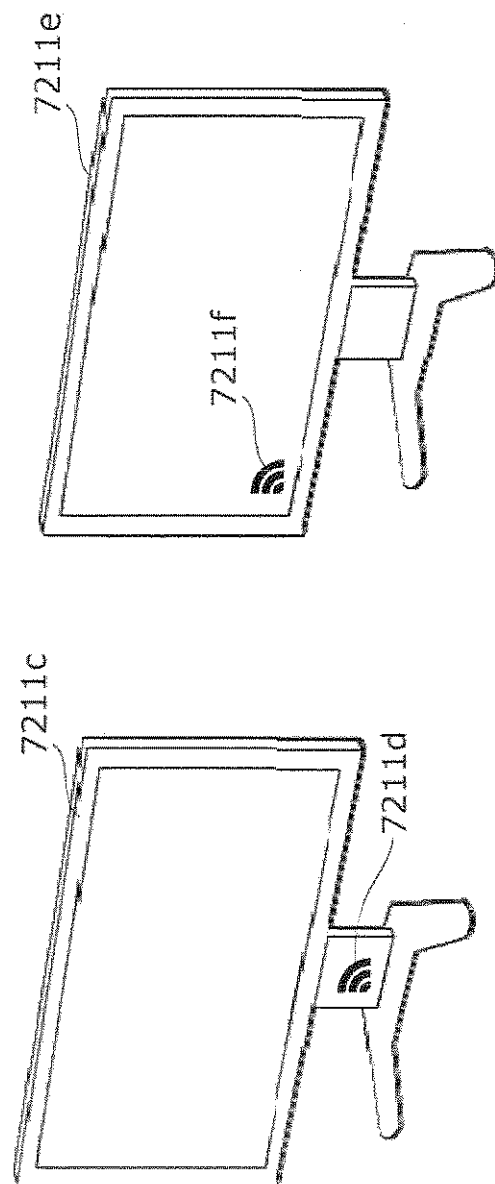
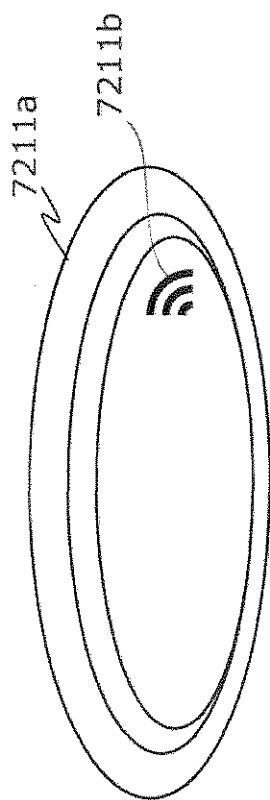


FIG. 295

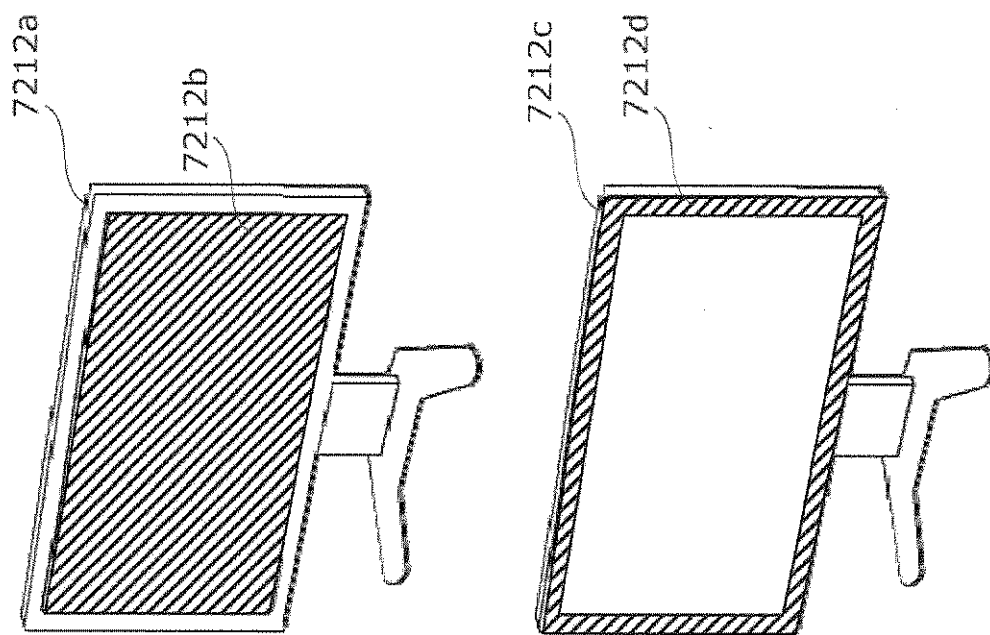


FIG. 296

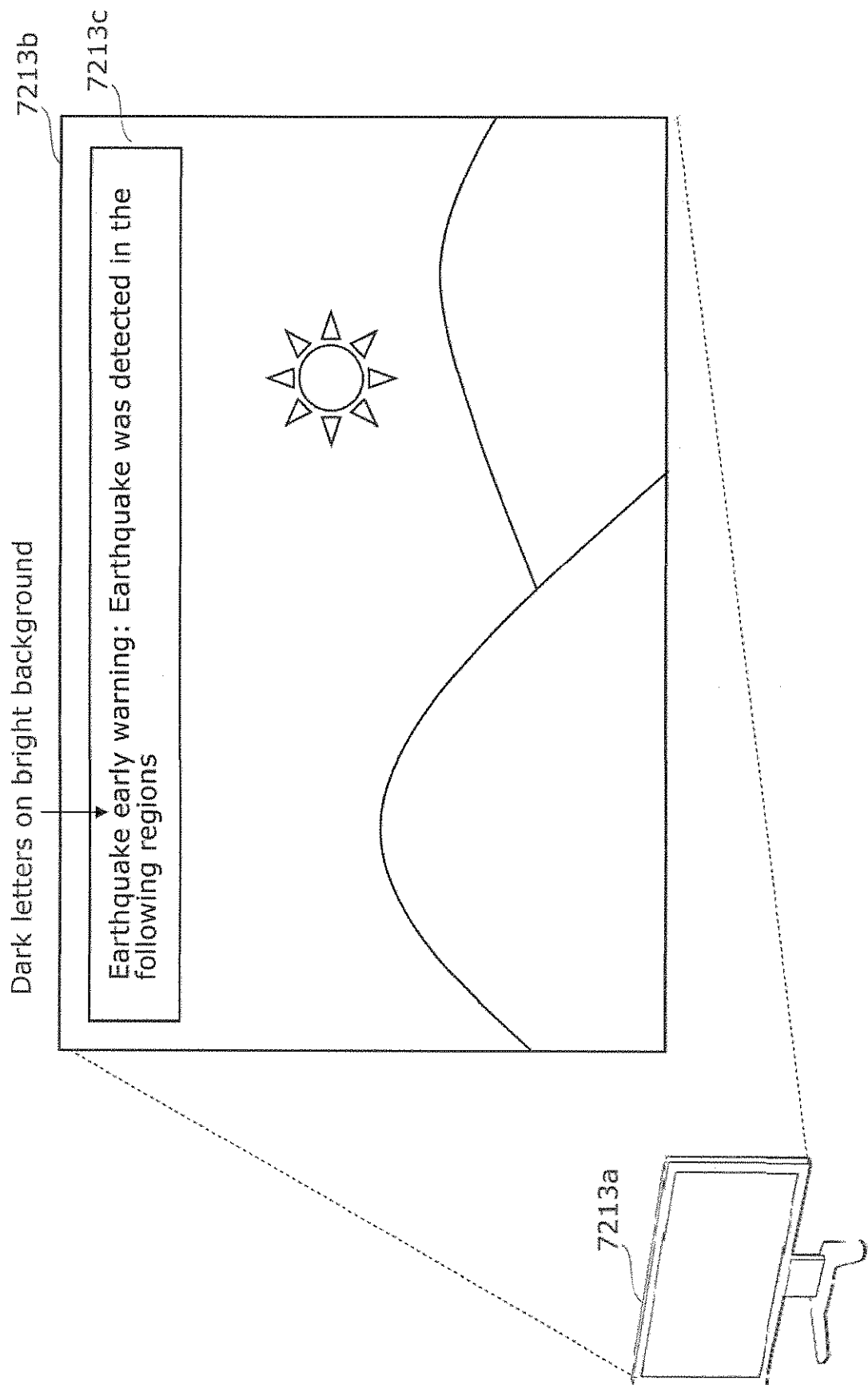


FIG. 297

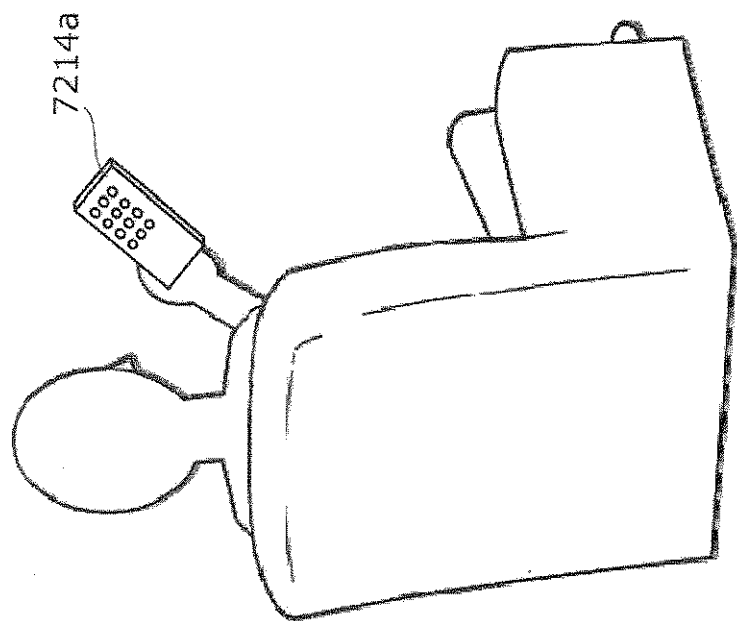
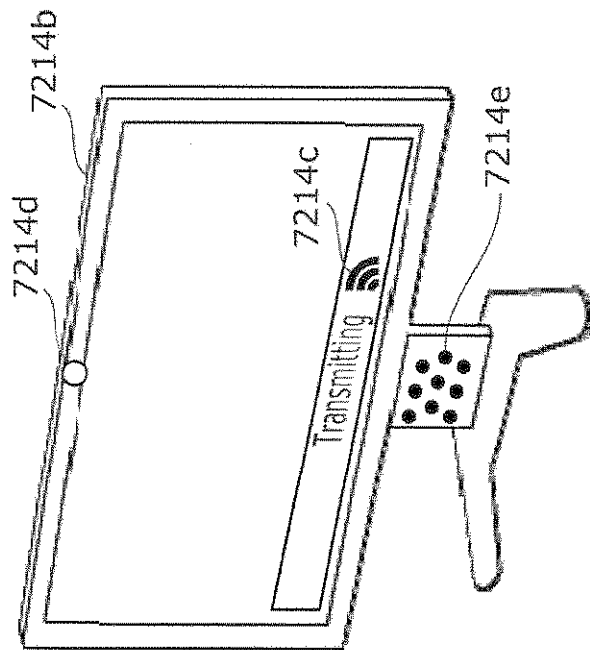


FIG. 298

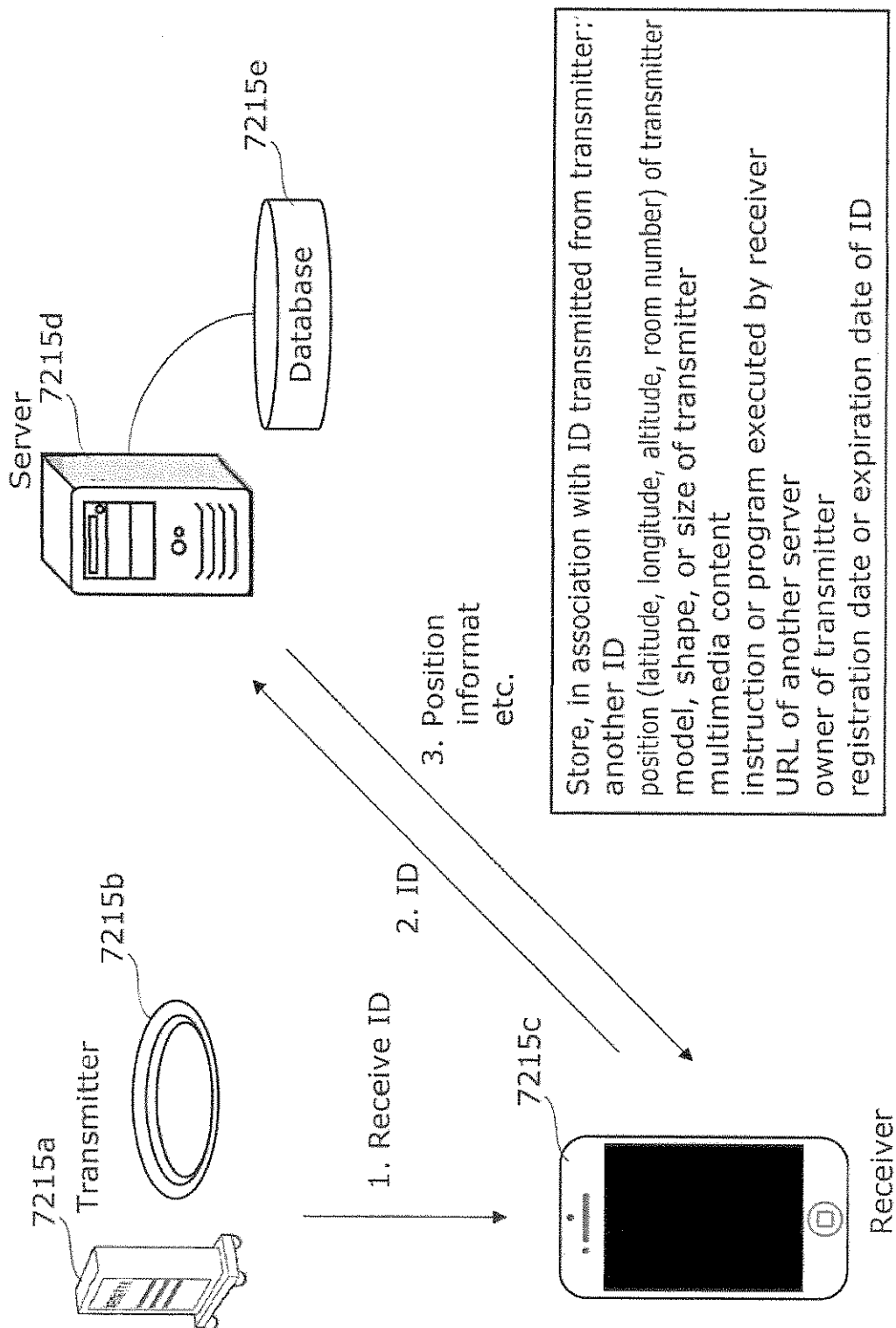


FIG. 299

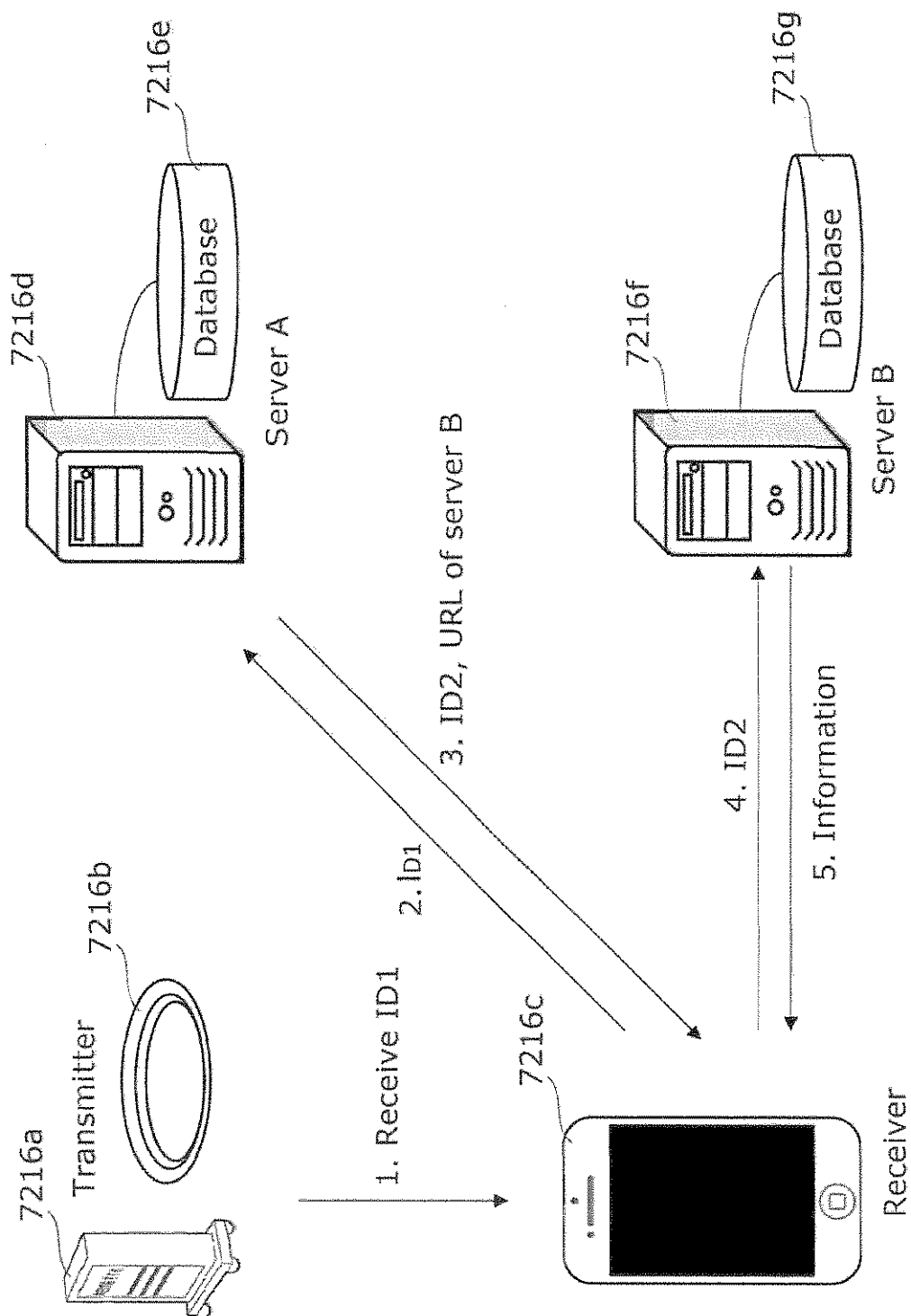


FIG. 300

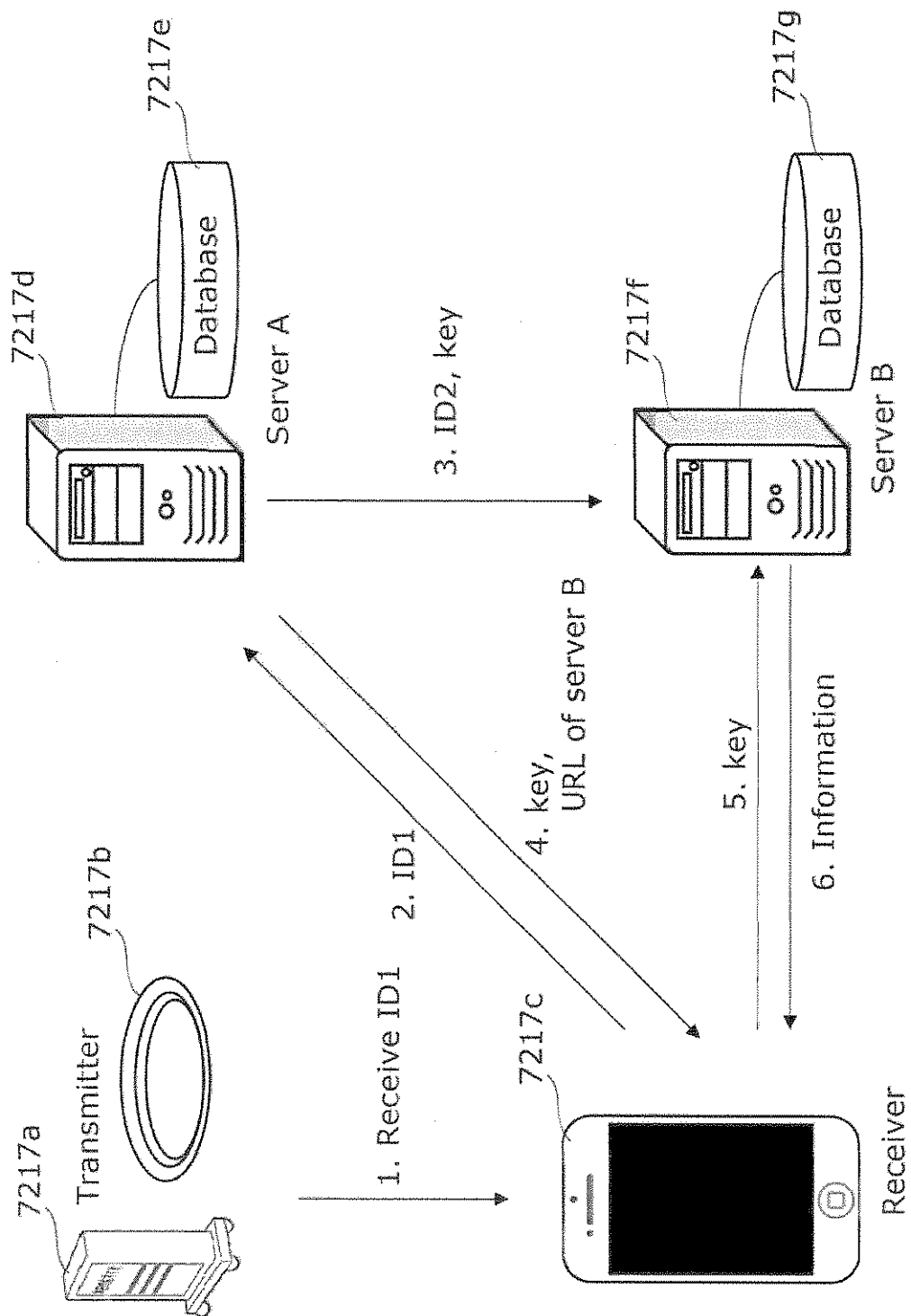


FIG. 301A

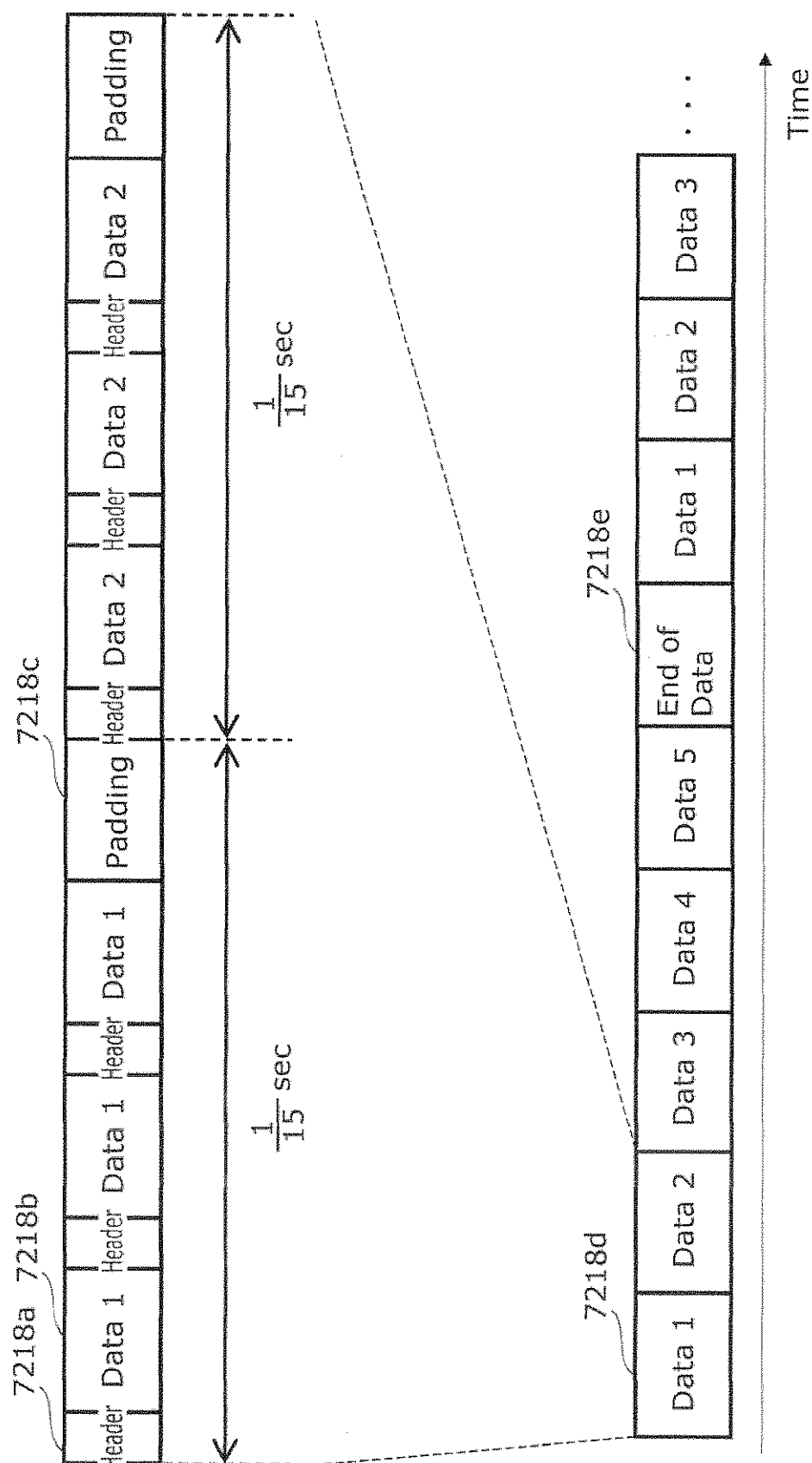


FIG. 301B

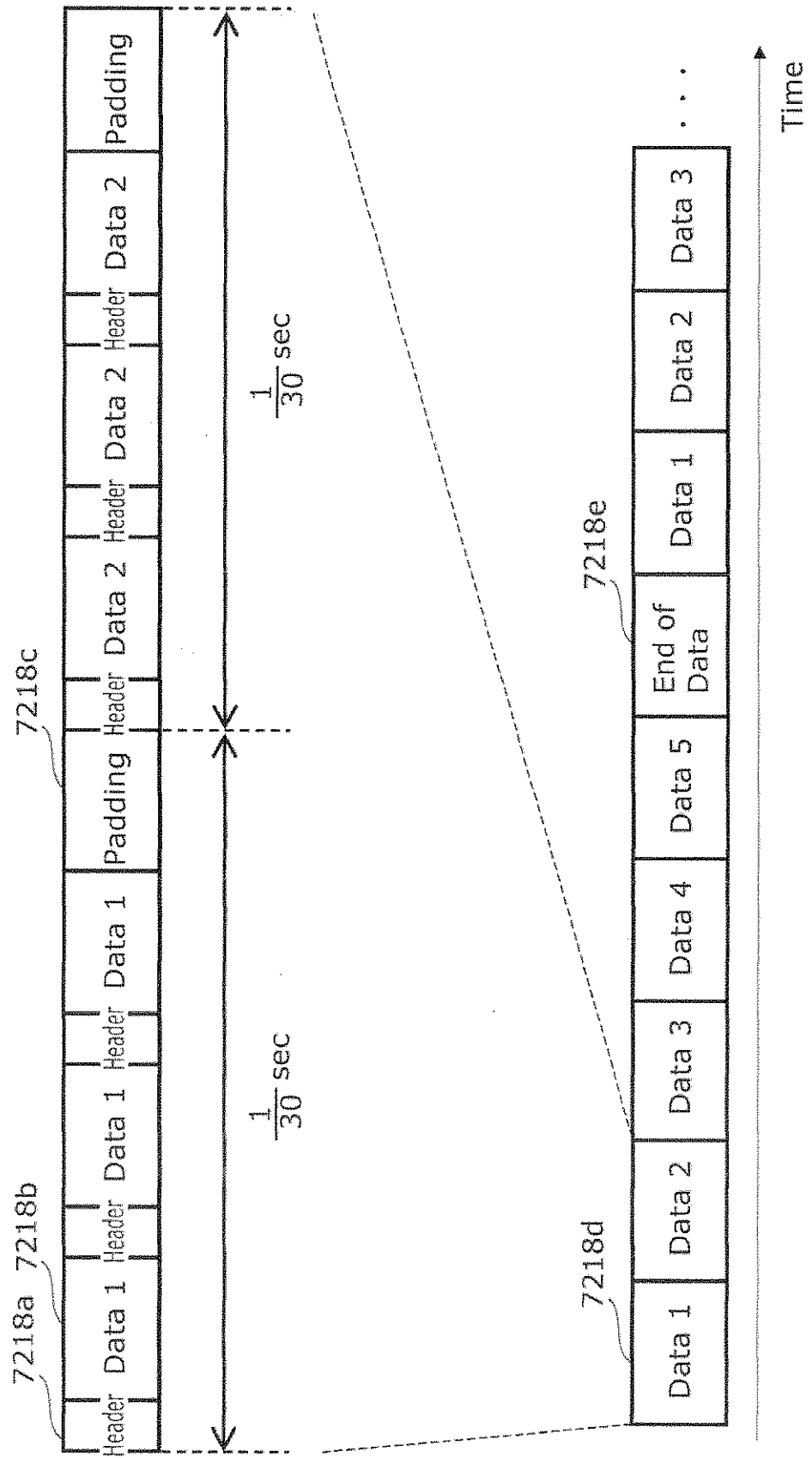


FIG. 302

7219a

Transmission signal	Modulated signal
00 (0)	01111
01 (1)	10111
10 (2)	11011
11 (3)	11101
Header	11110

FIG. 303A

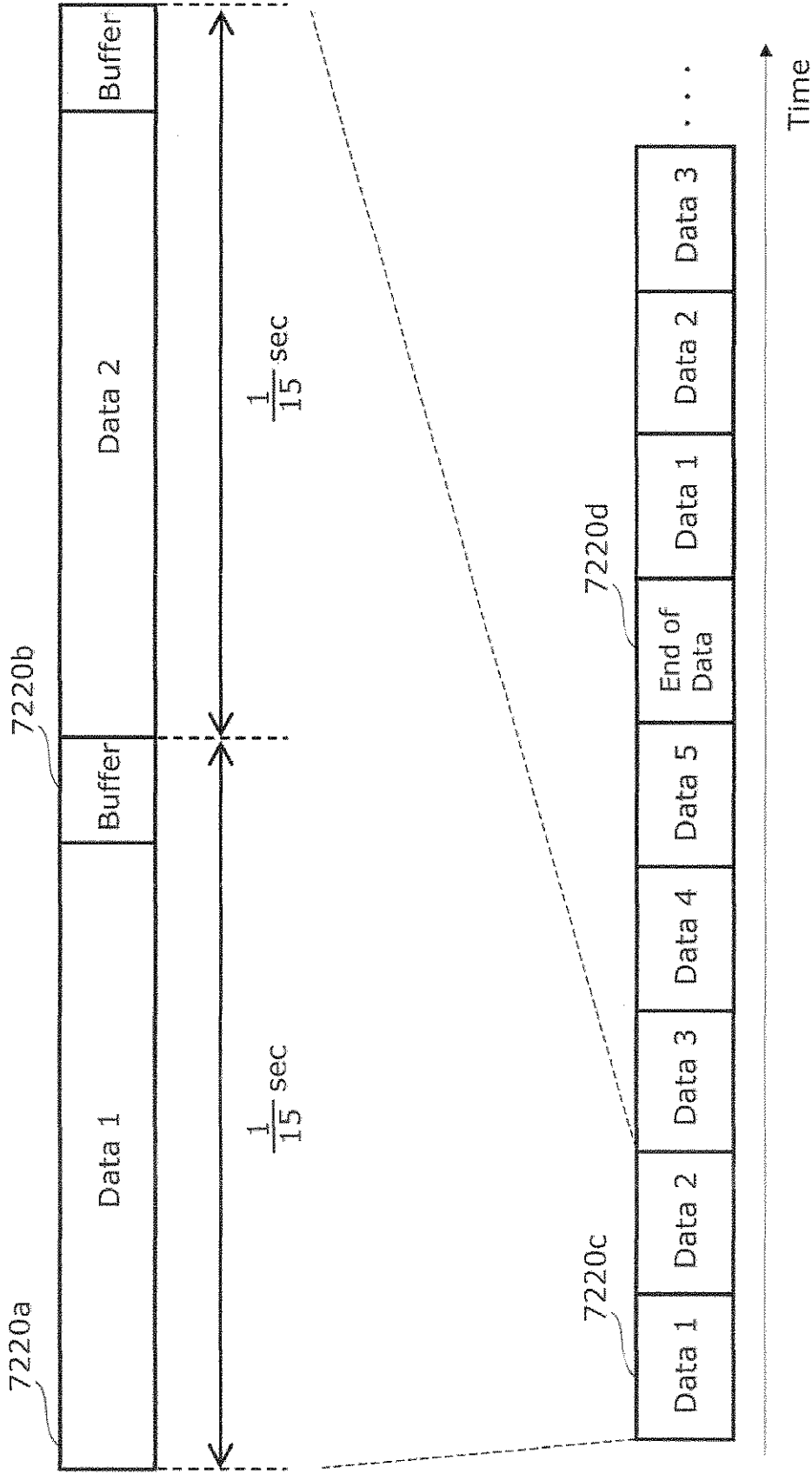


FIG. 303B

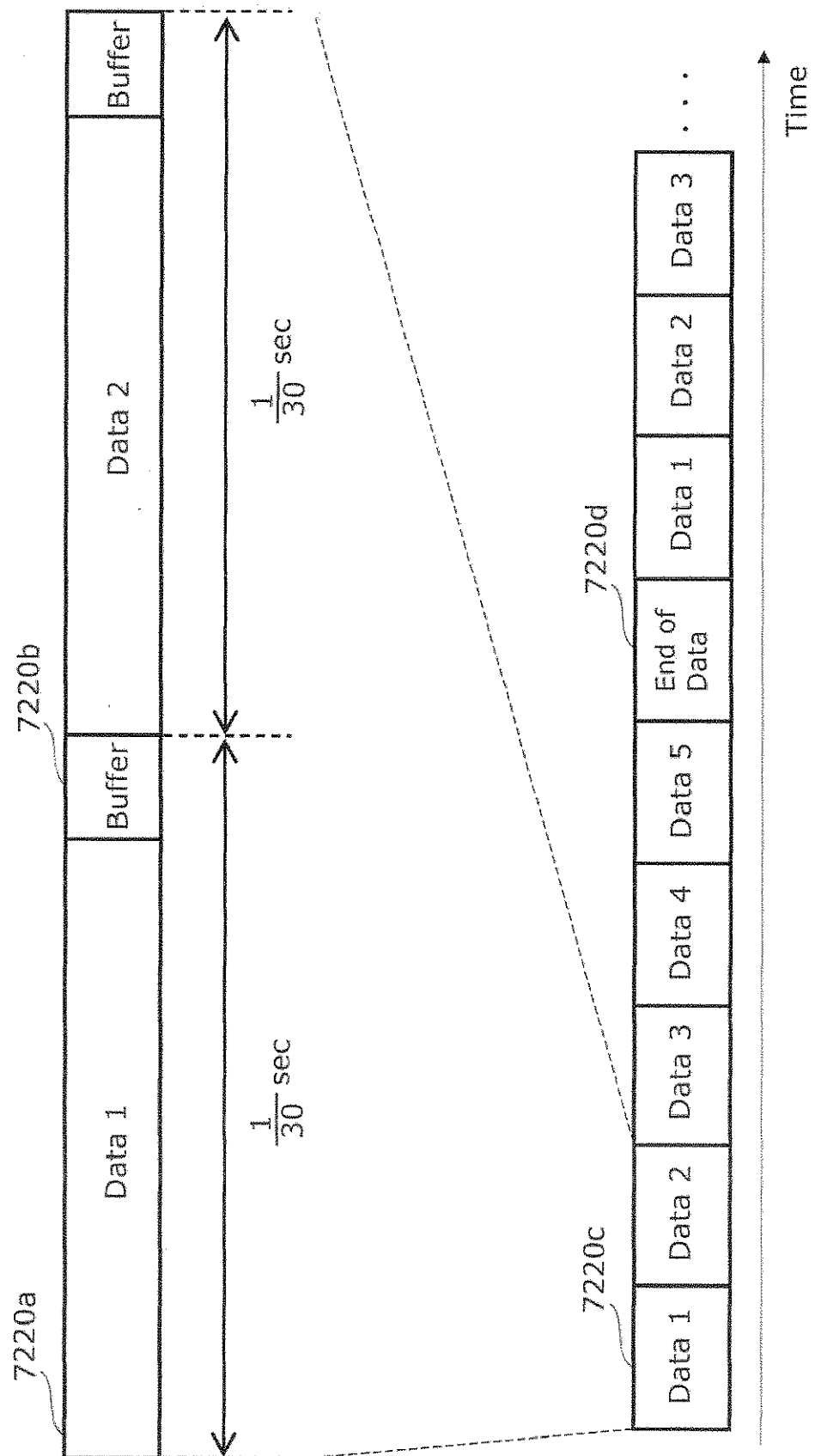


FIG. 304

7221a

Transmission signal	Modulation frequency
00 (0)	500Hz
01 (1)	1000Hz
10 (2)	2000Hz
11 (3)	5000Hz

FIG. 305A

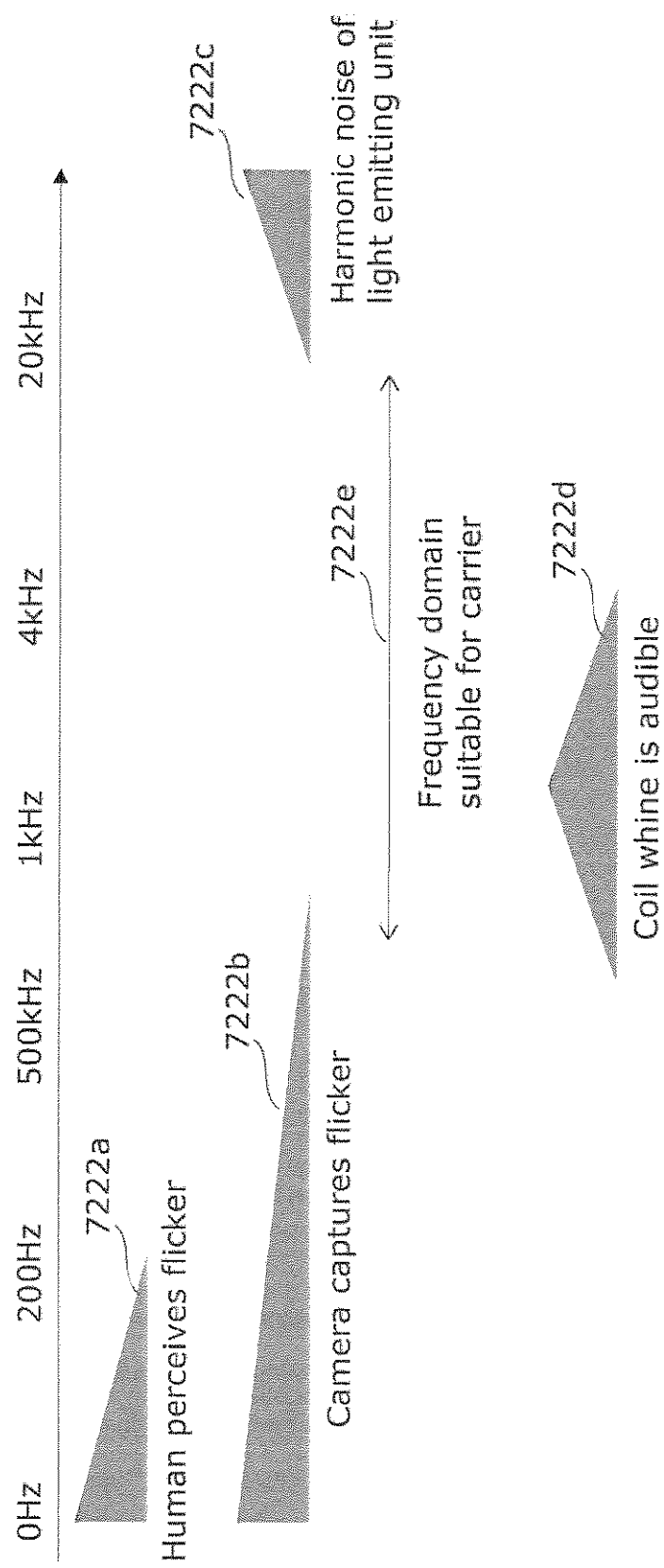


FIG. 305B

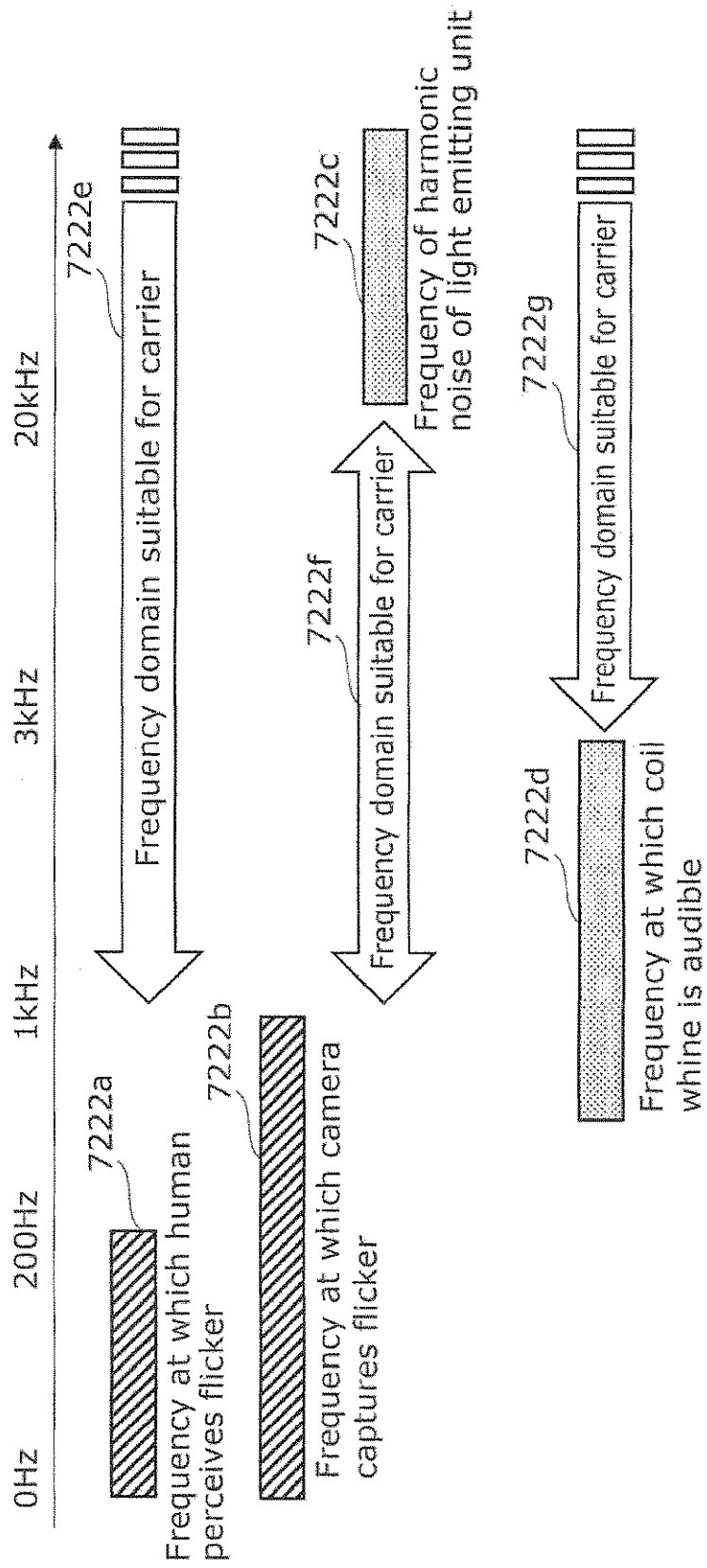


FIG. 306

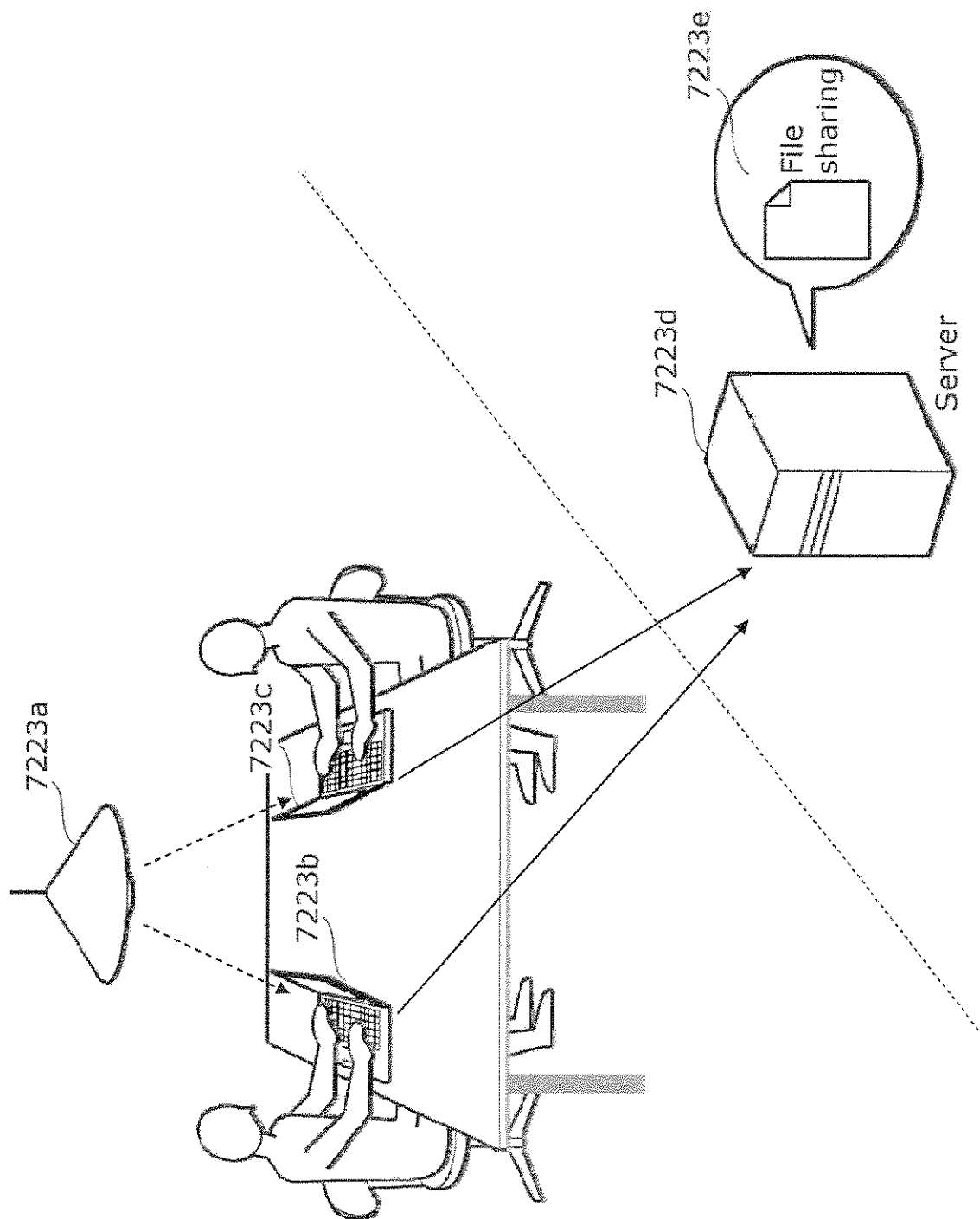


FIG. 307

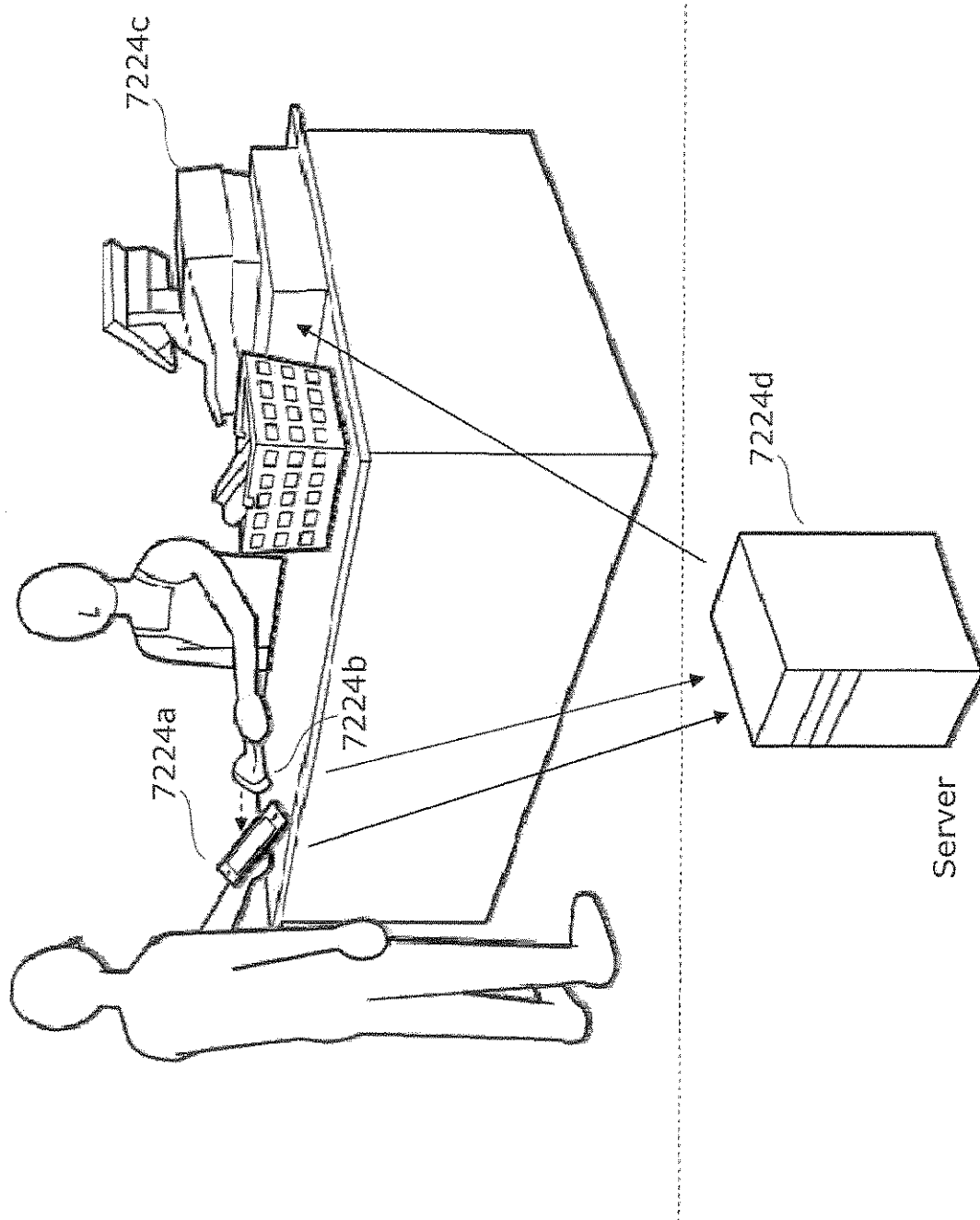


FIG. 308

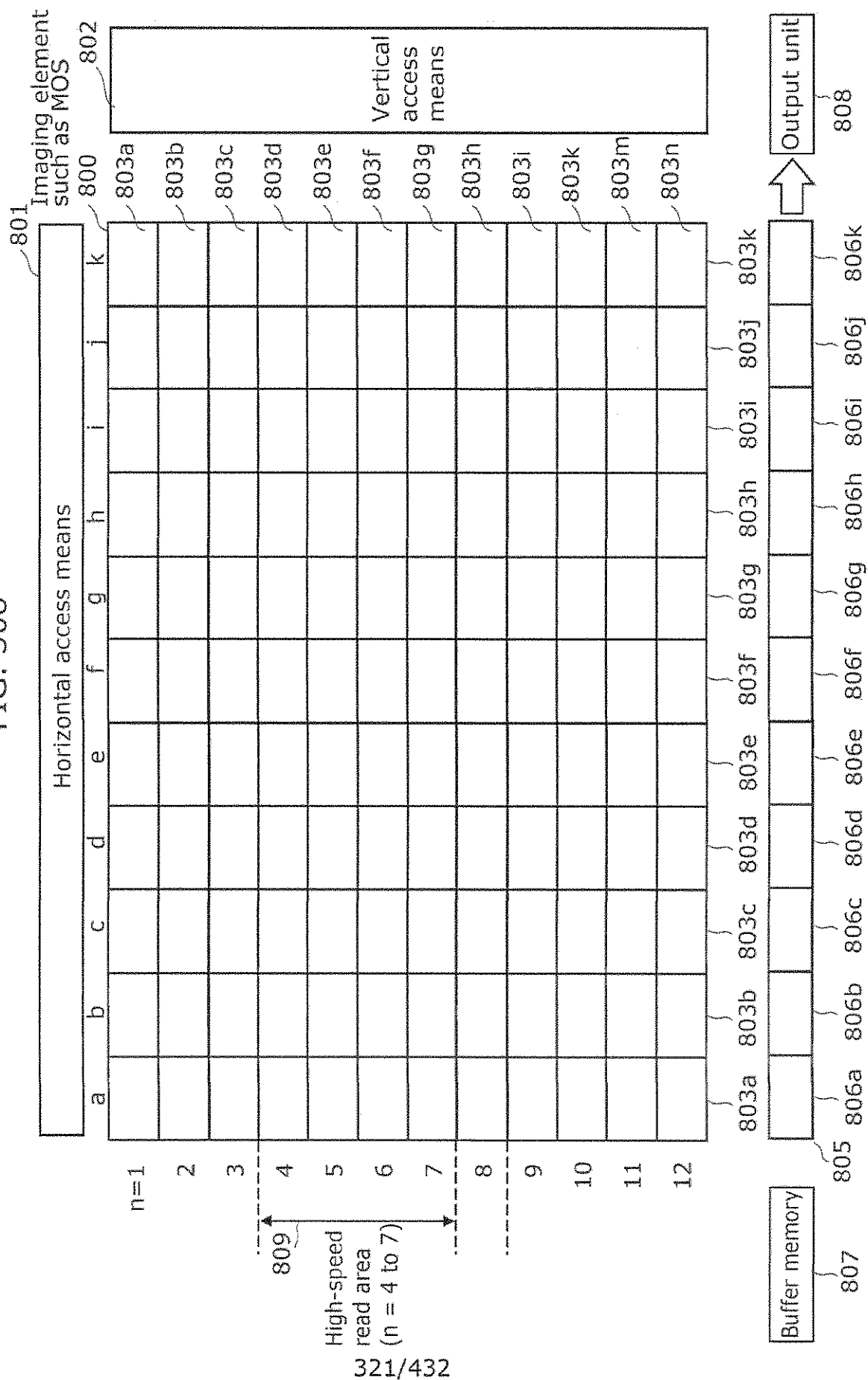


FIG. 309

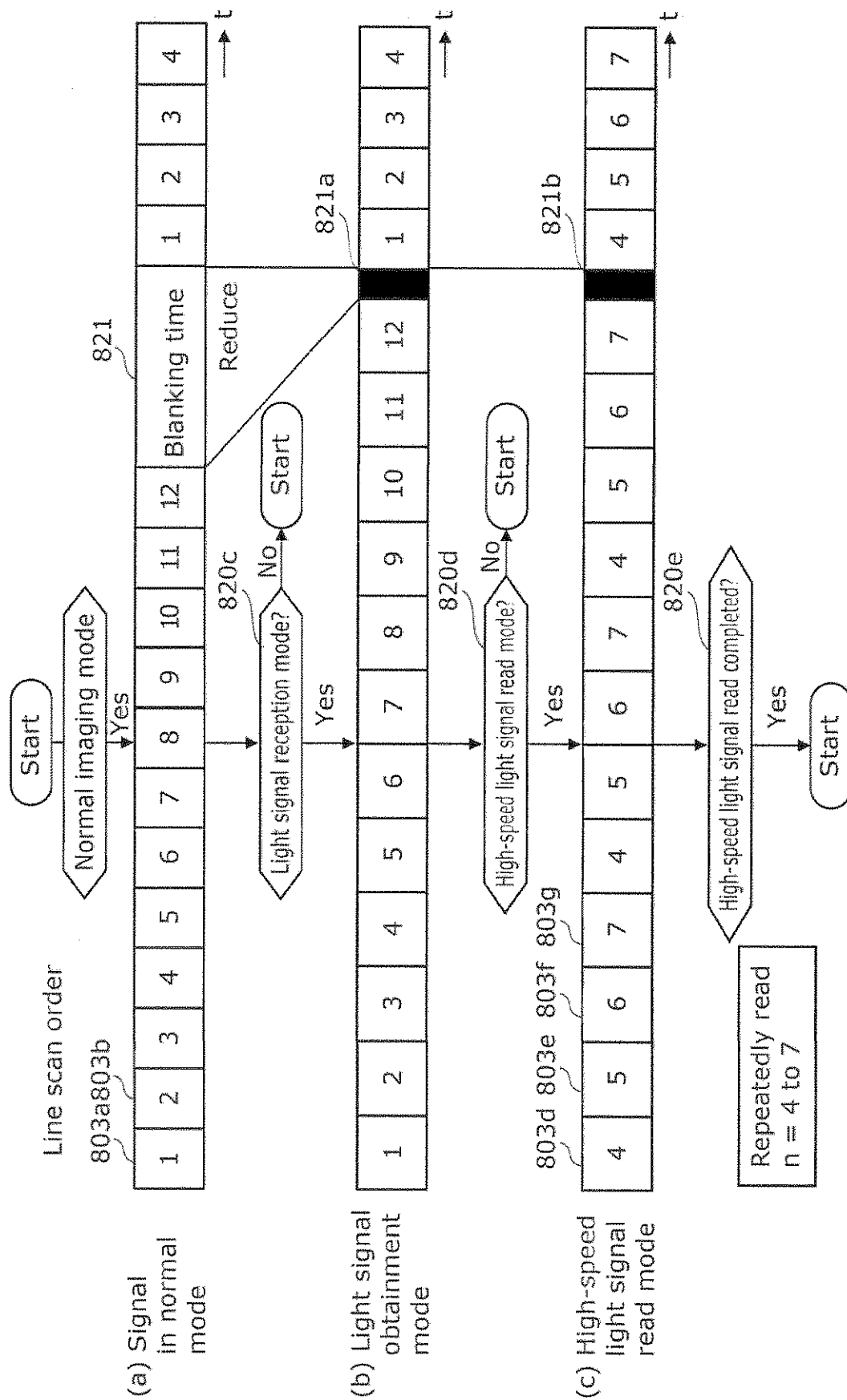


FIG. 310

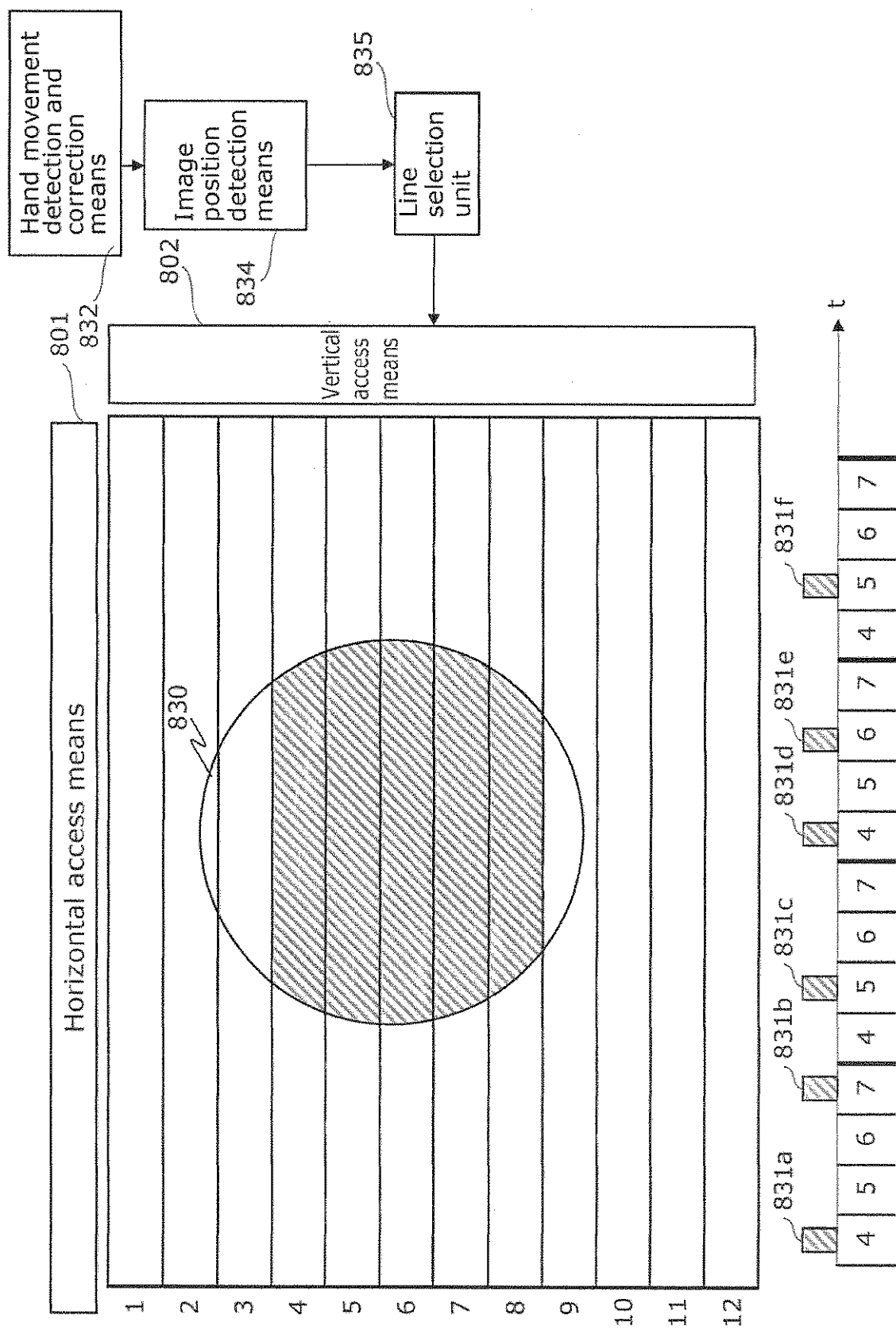


FIG. 311A

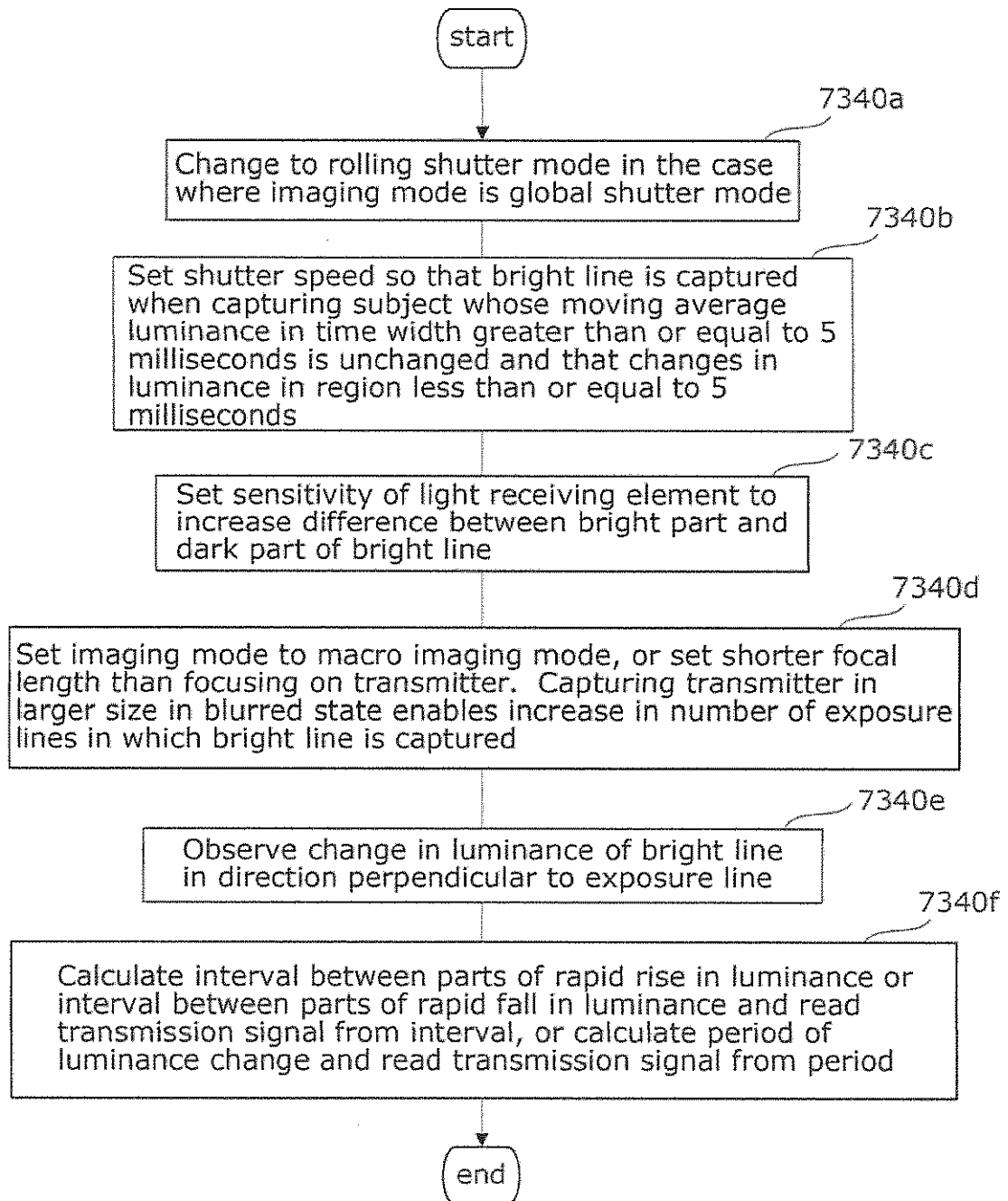


FIG. 311B

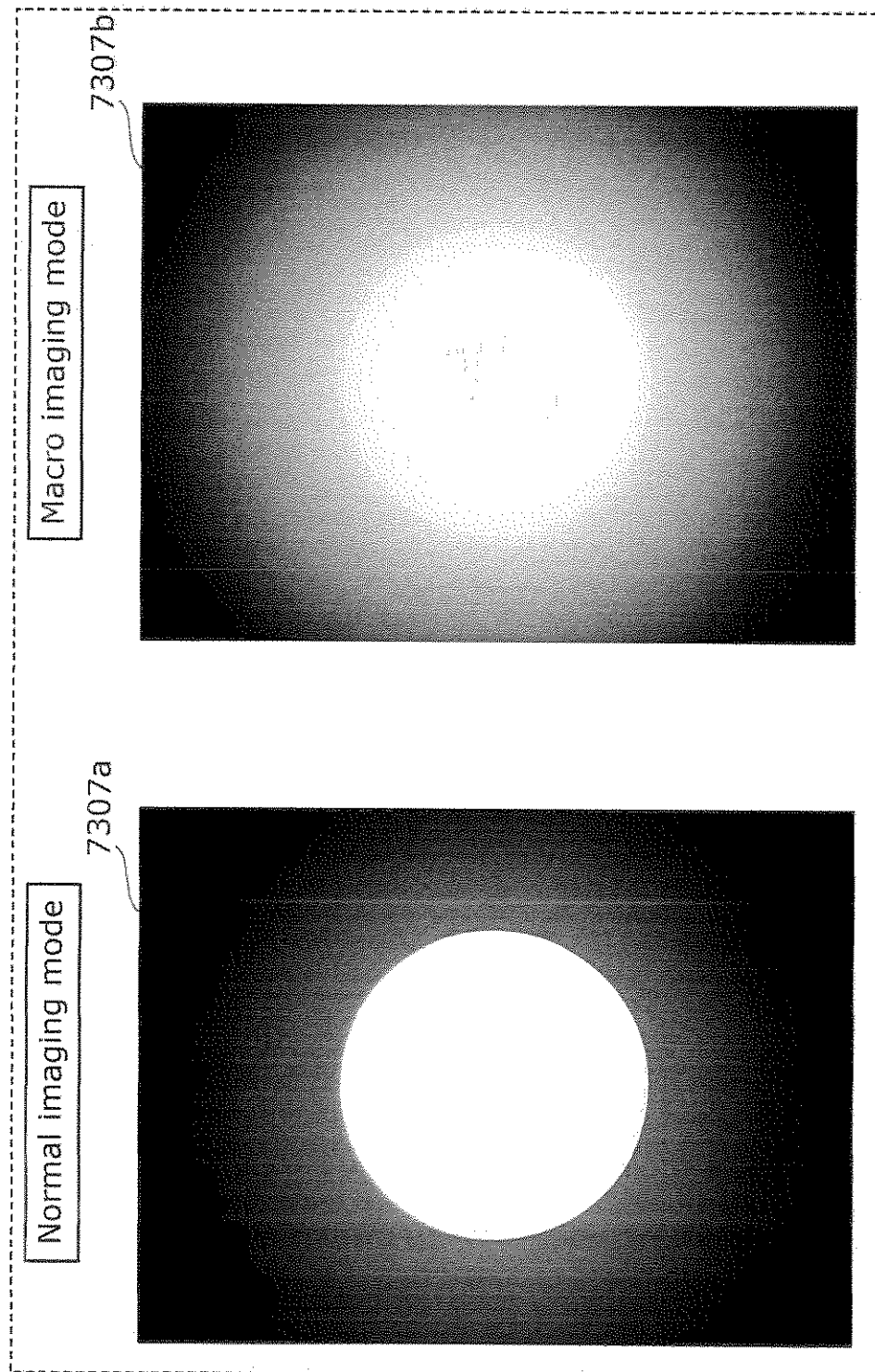


FIG. 312

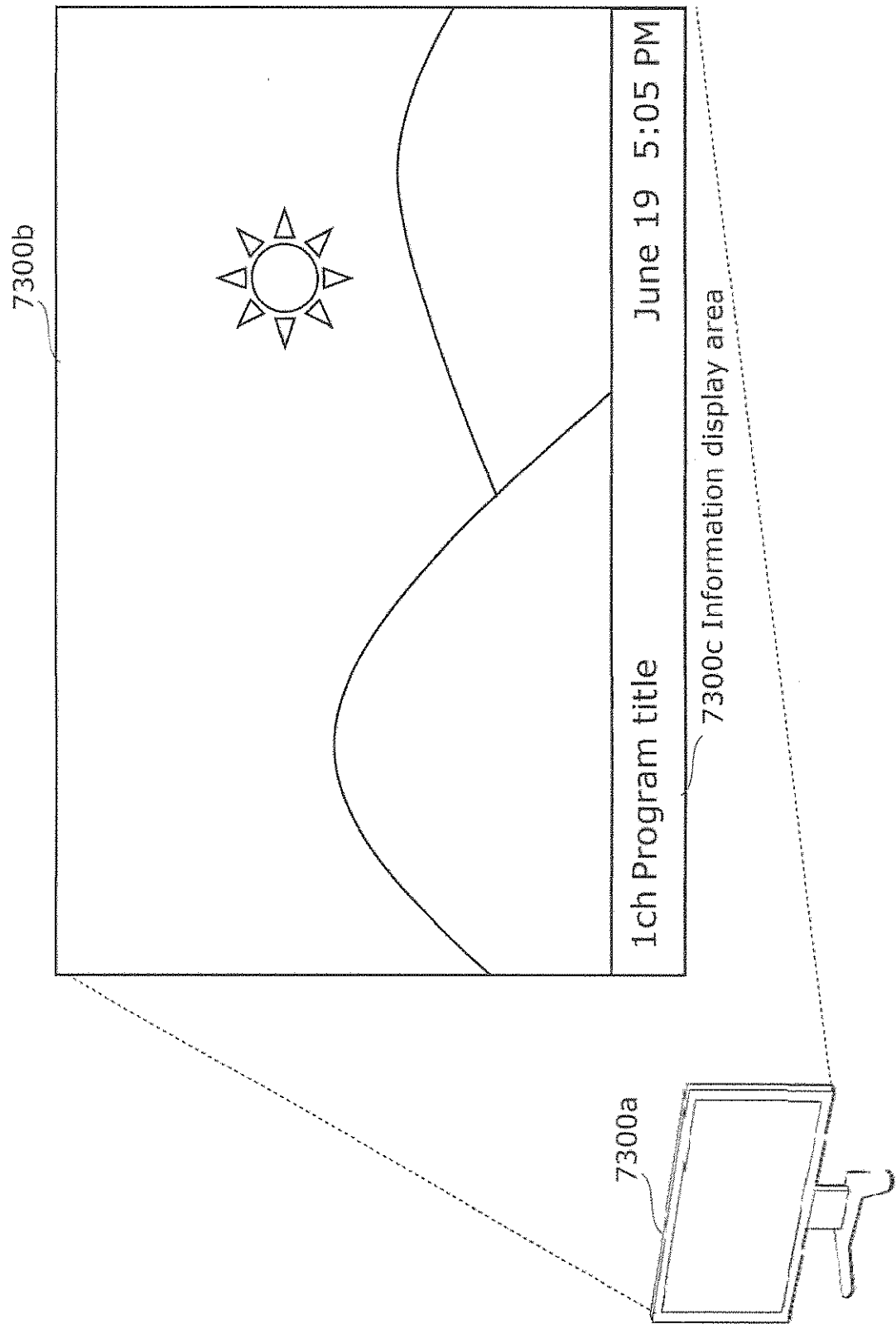


FIG. 313

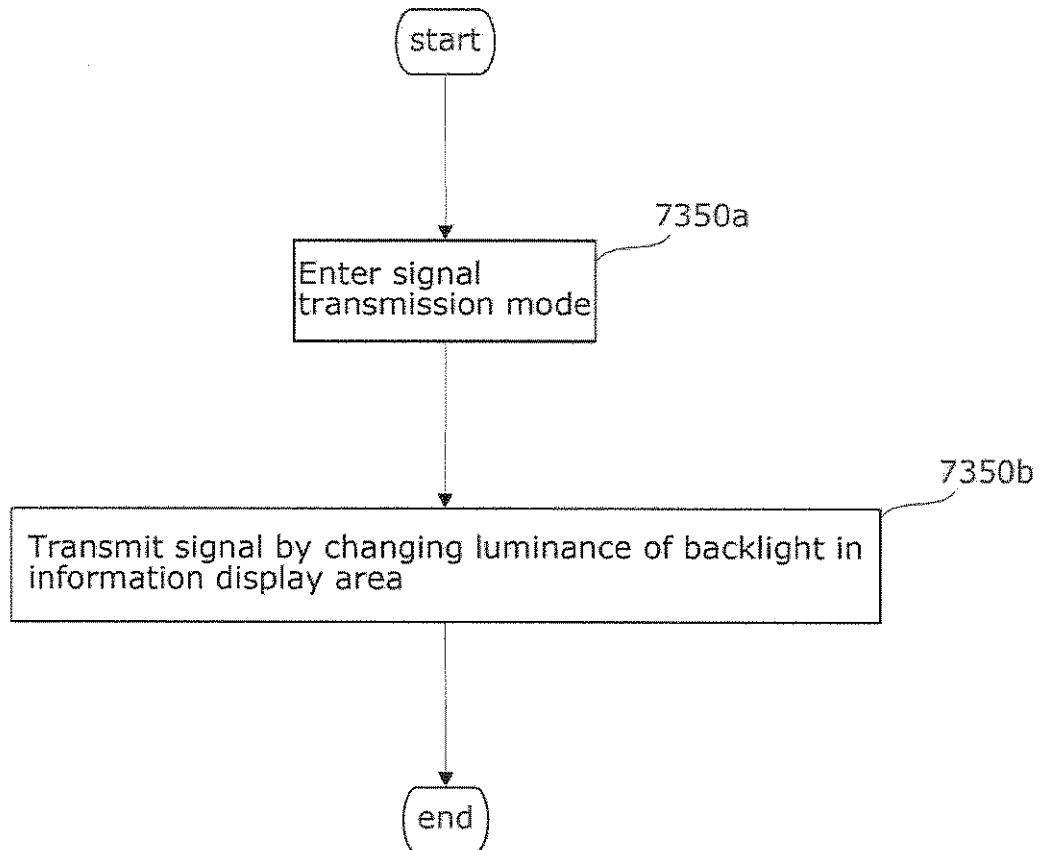


FIG. 314

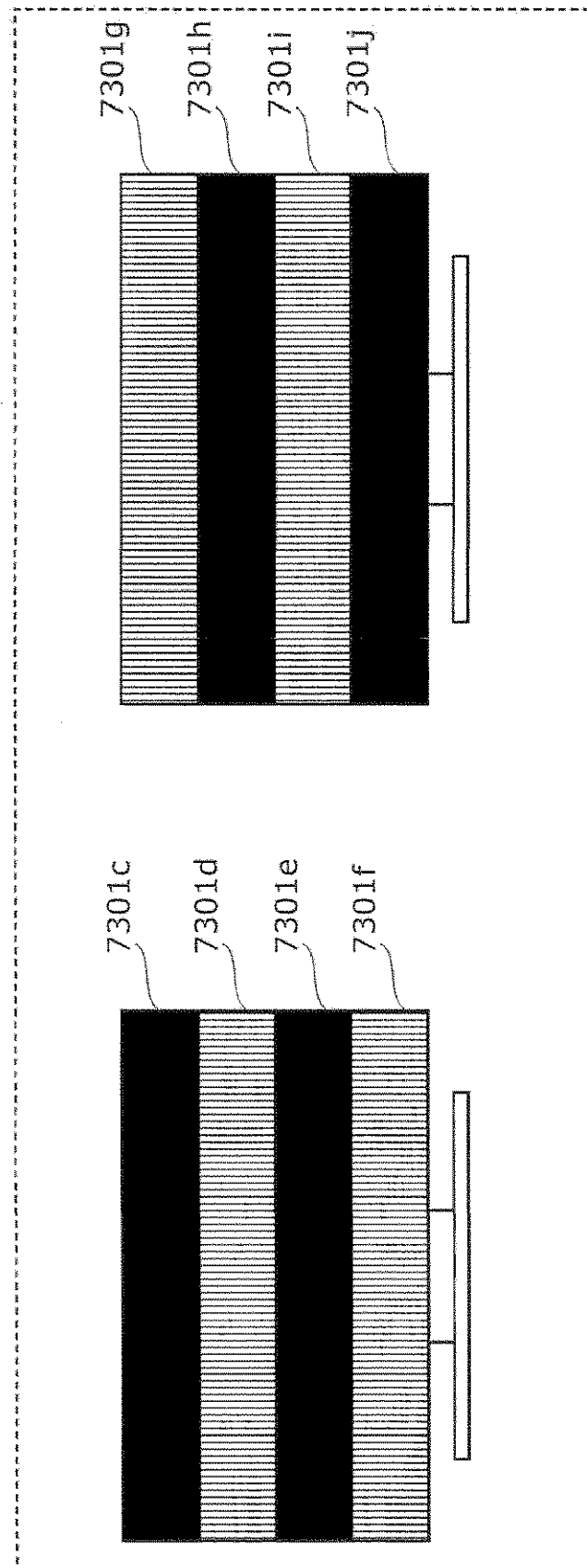


FIG. 315

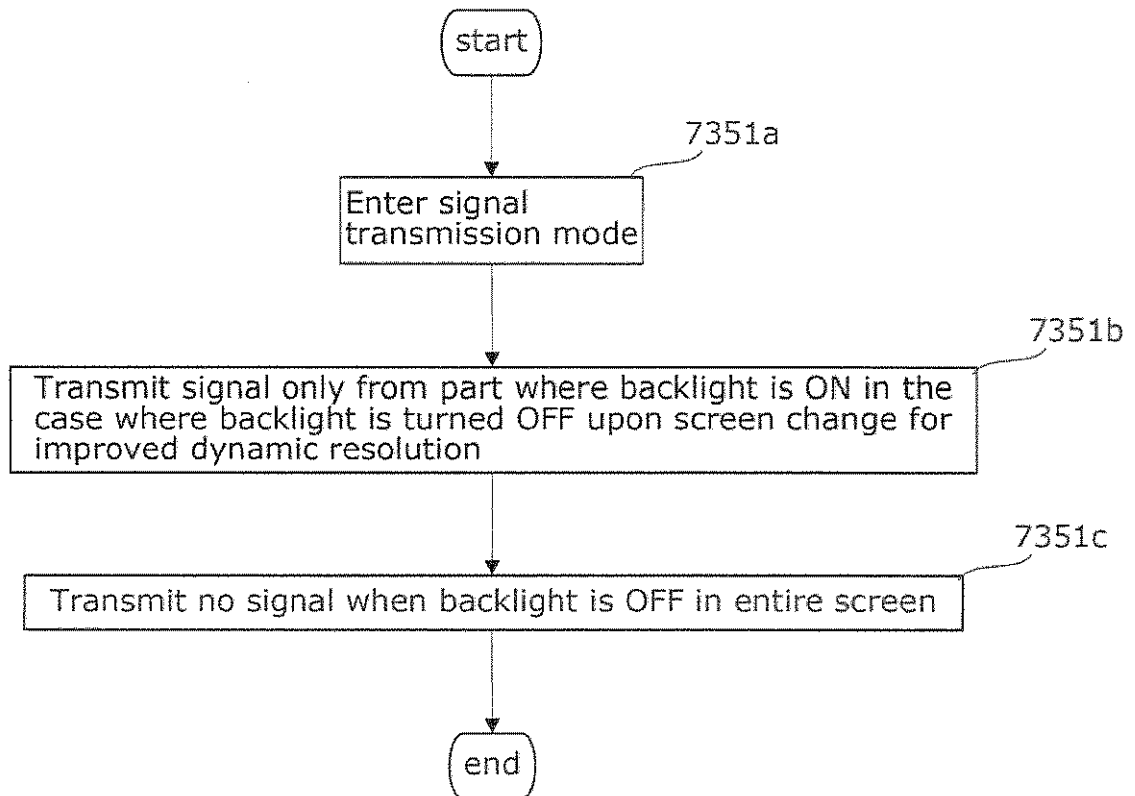


FIG. 316

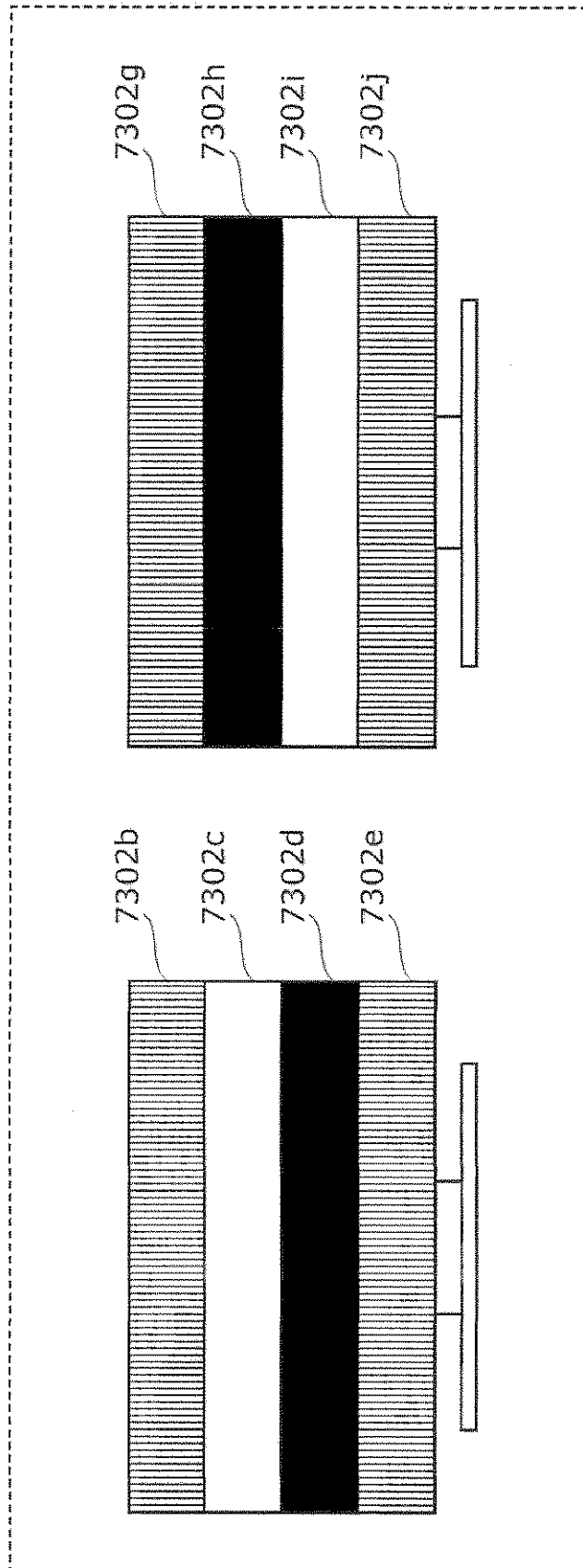


FIG. 317

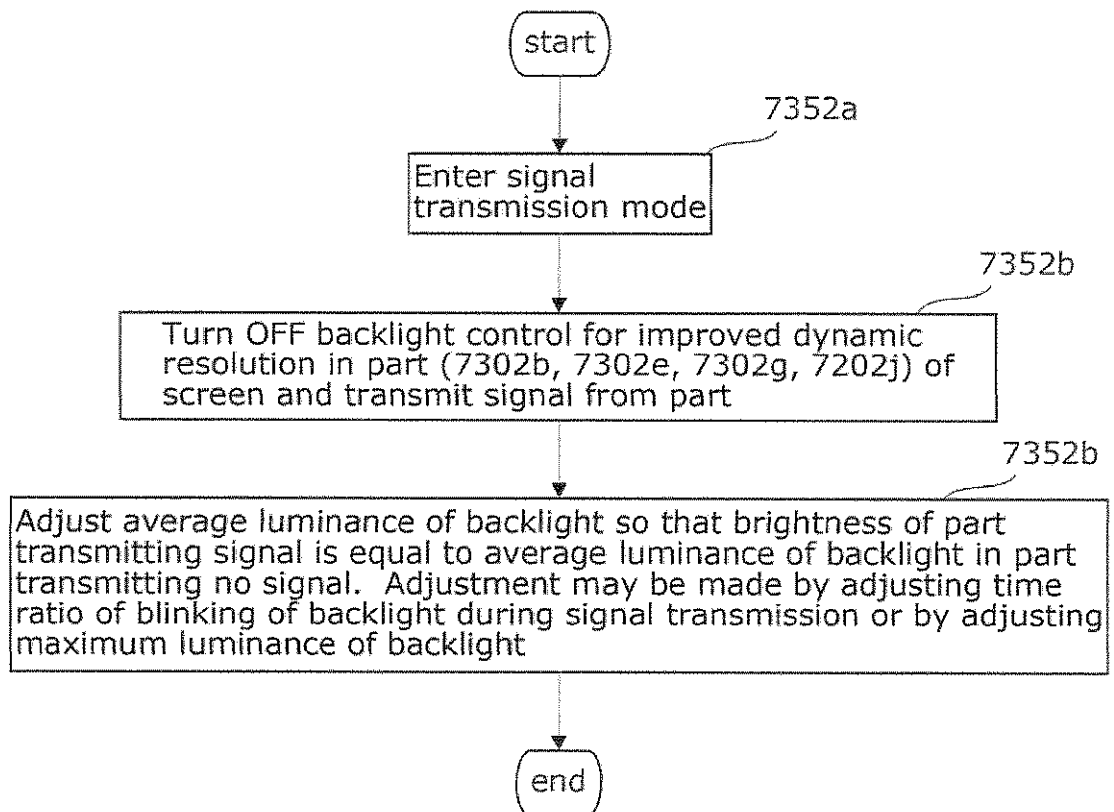


FIG. 318

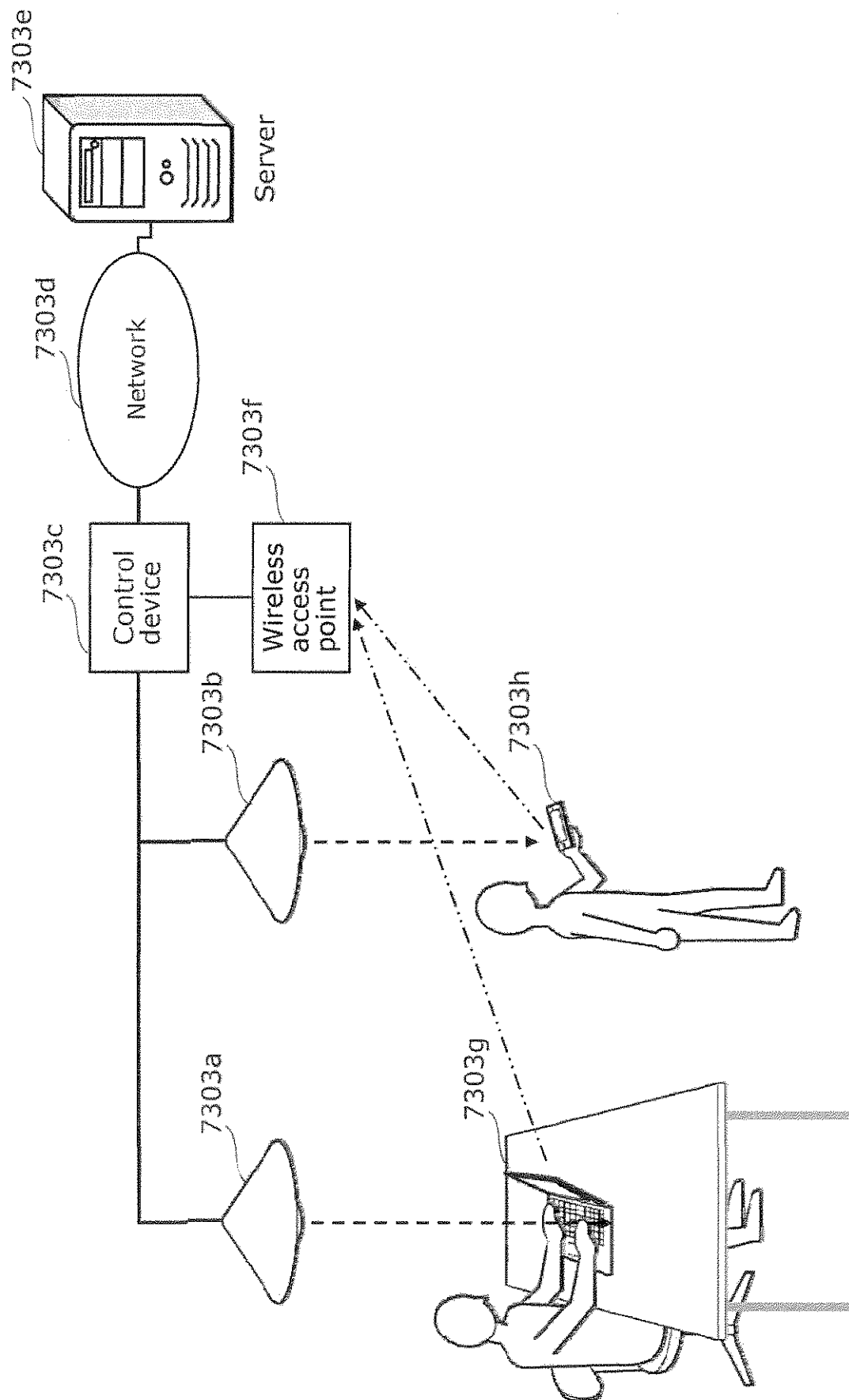


FIG. 319

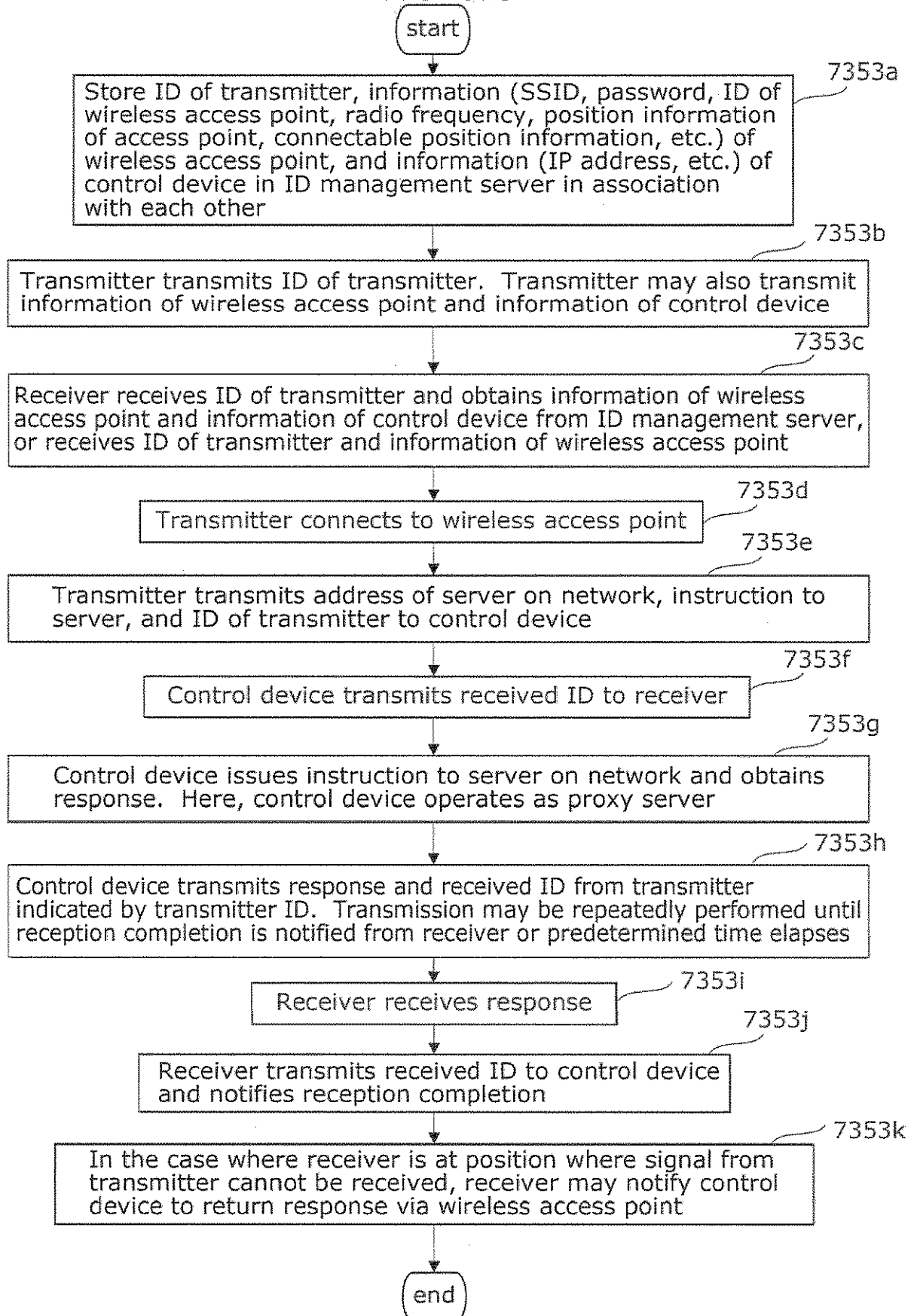


FIG. 320

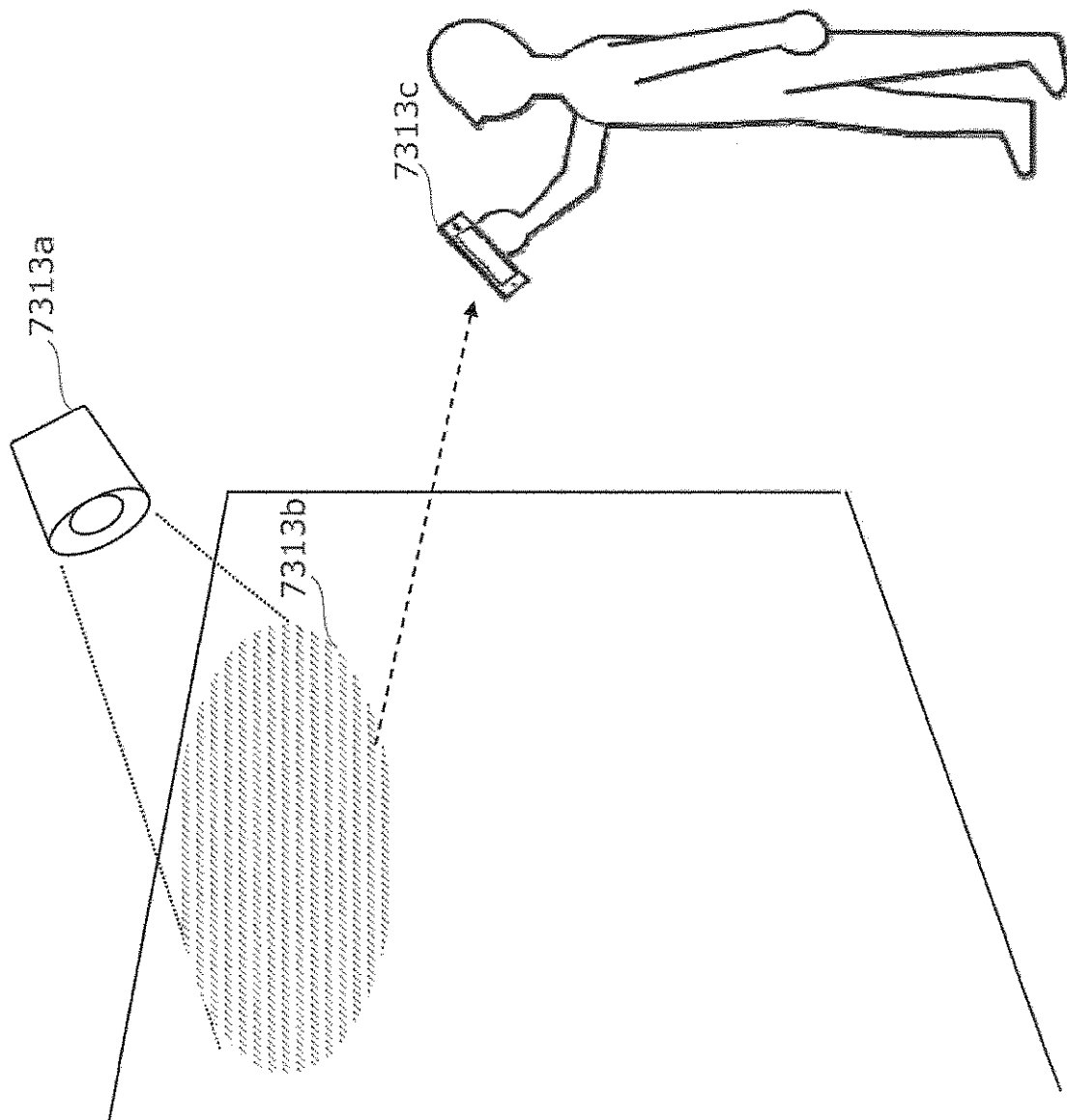


FIG. 321

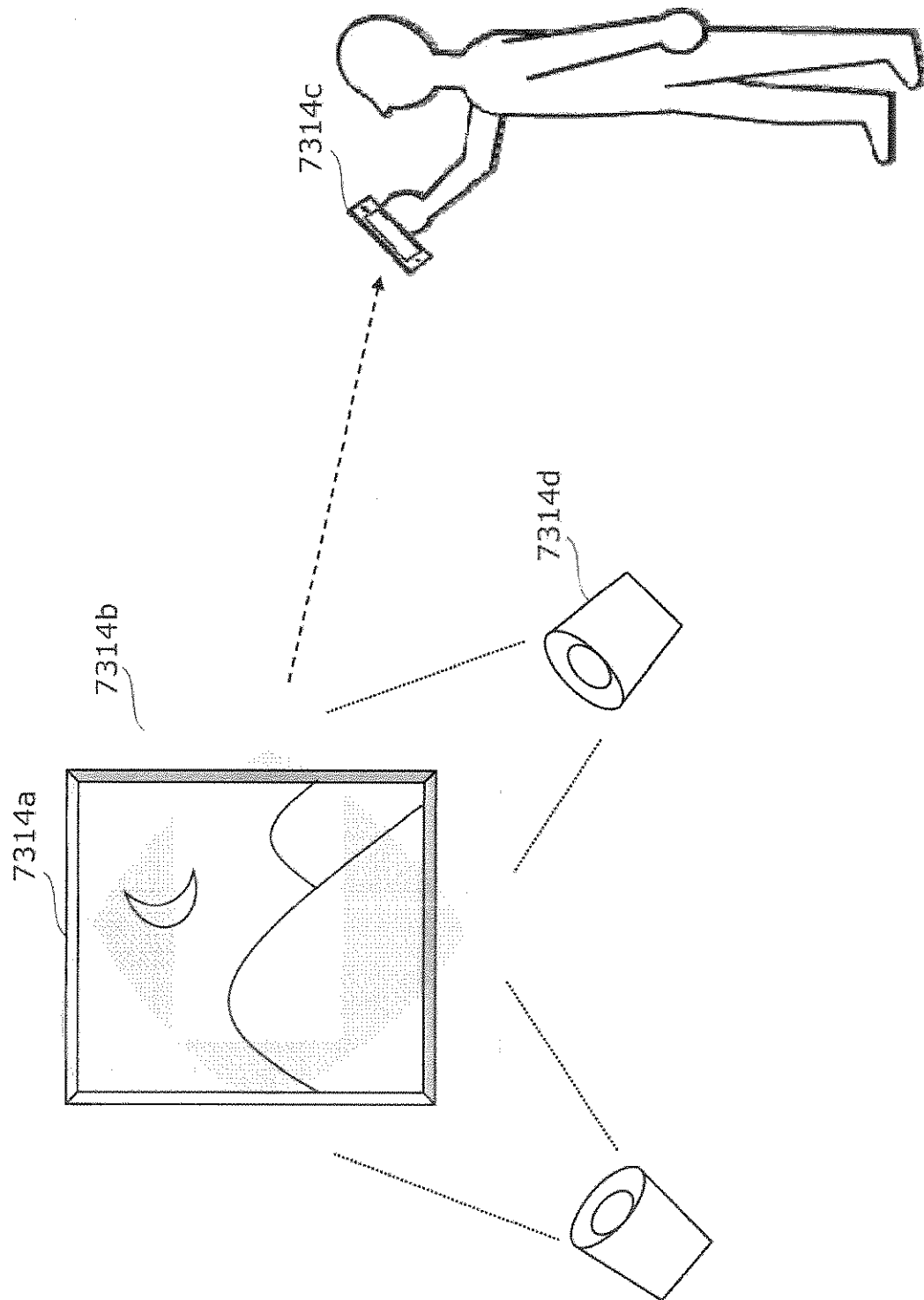


FIG. 322

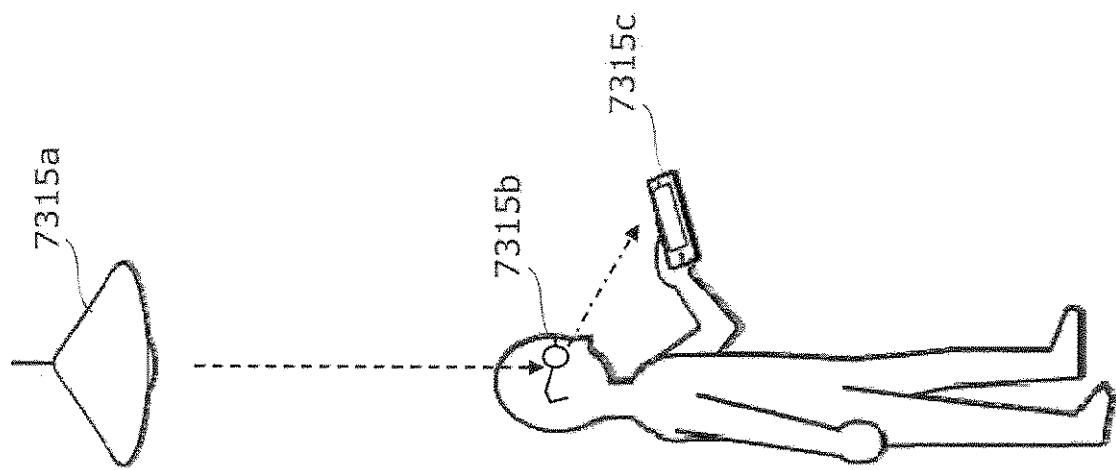


FIG. 323A

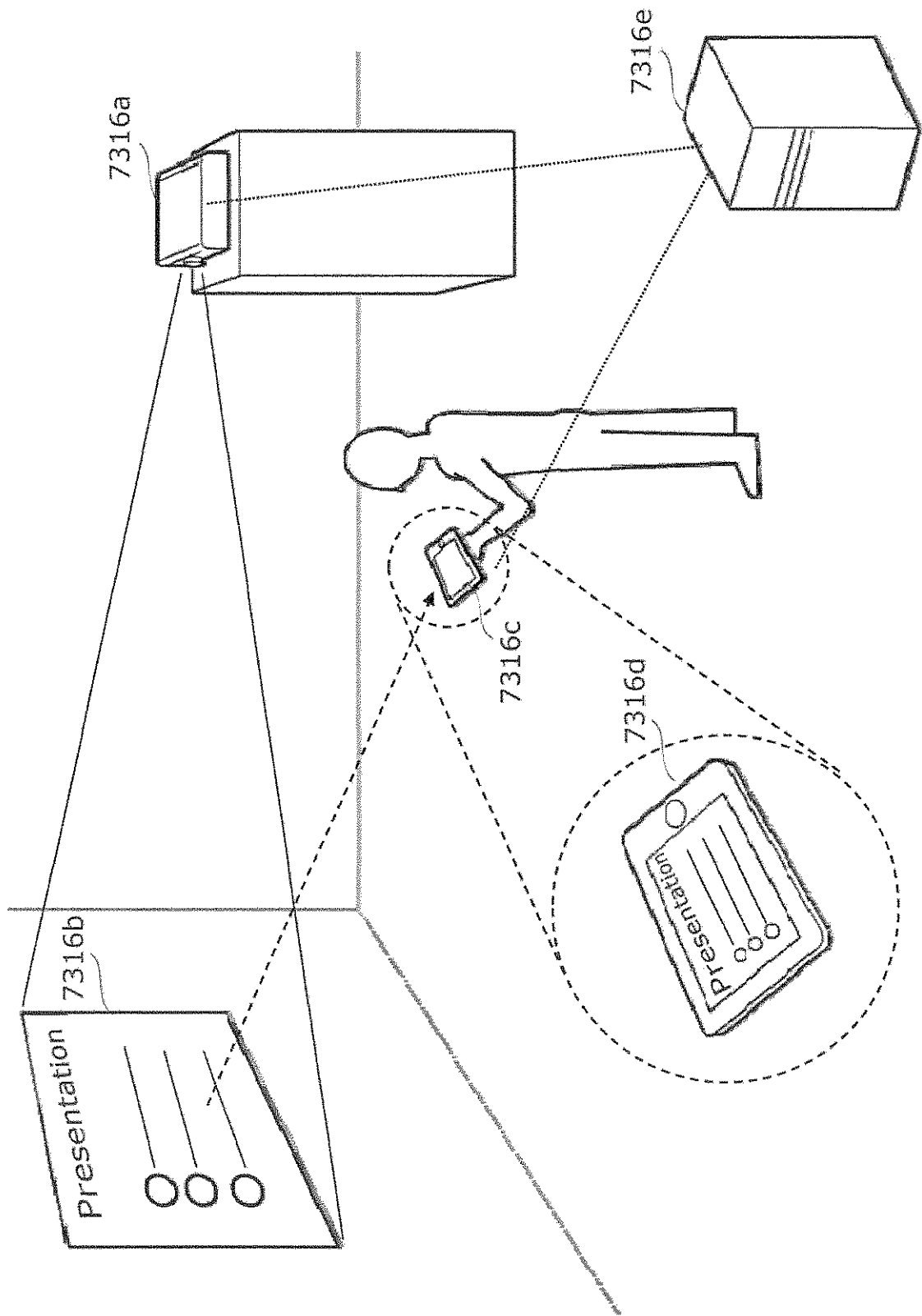


FIG. 323B

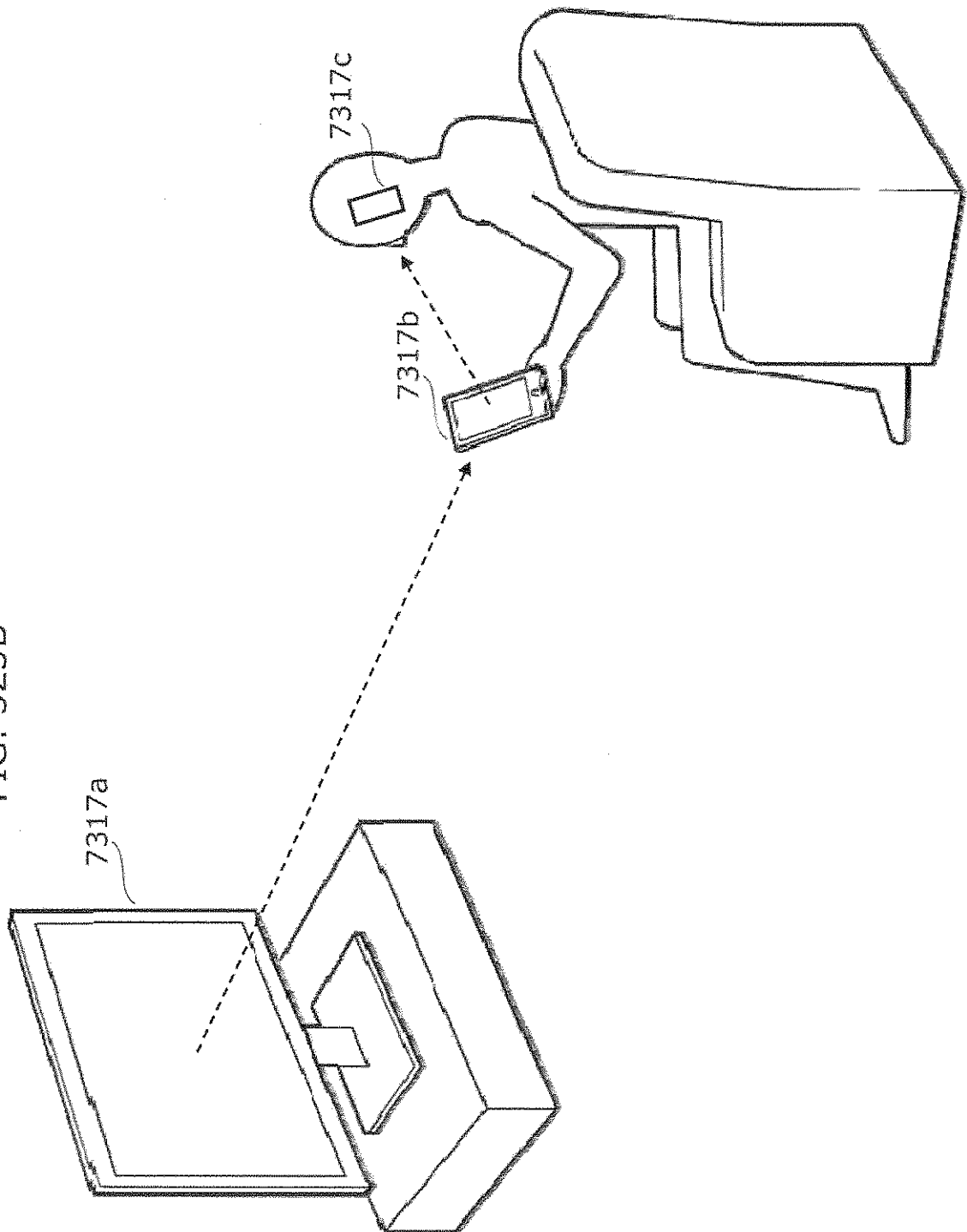


FIG. 323C

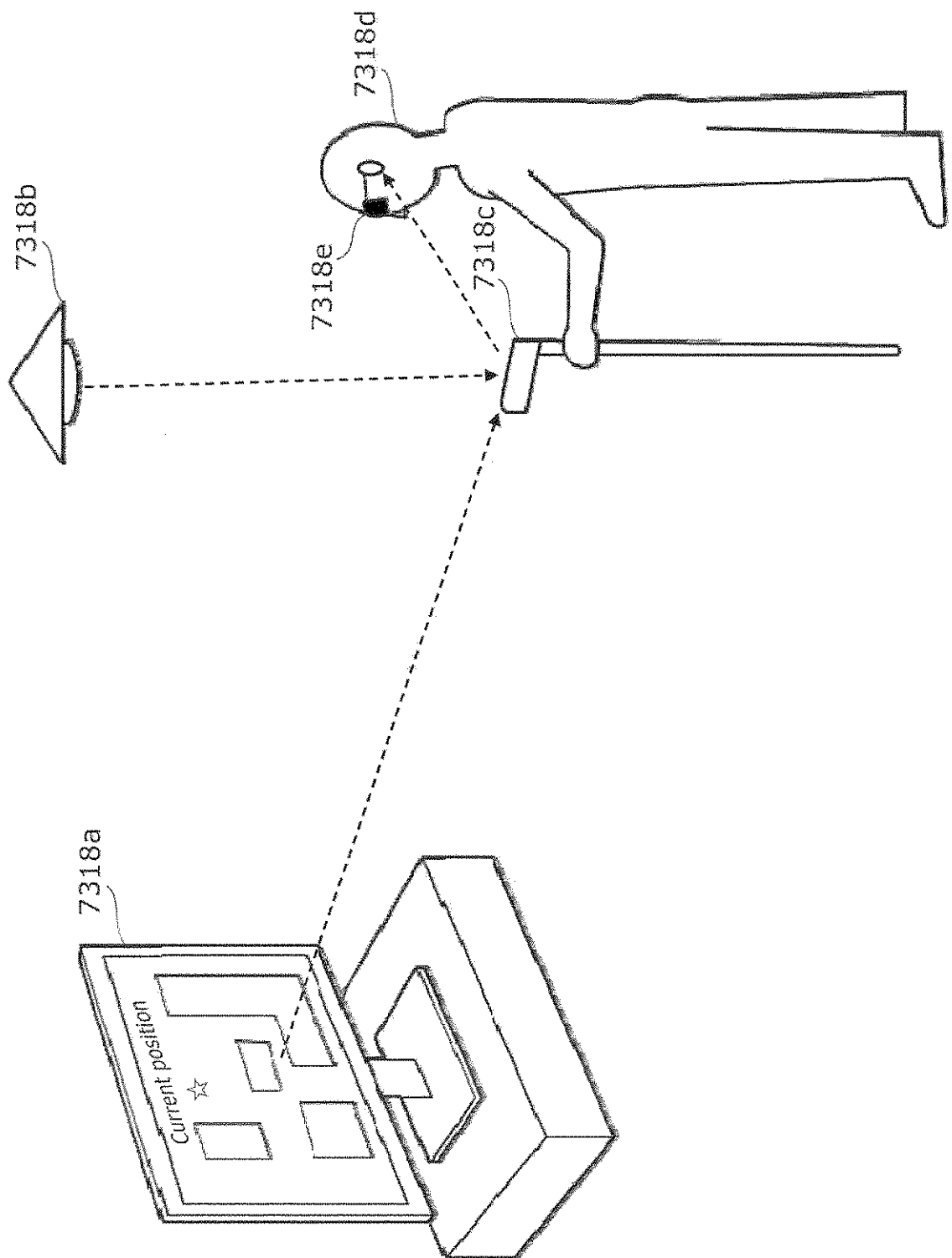


FIG. 323D

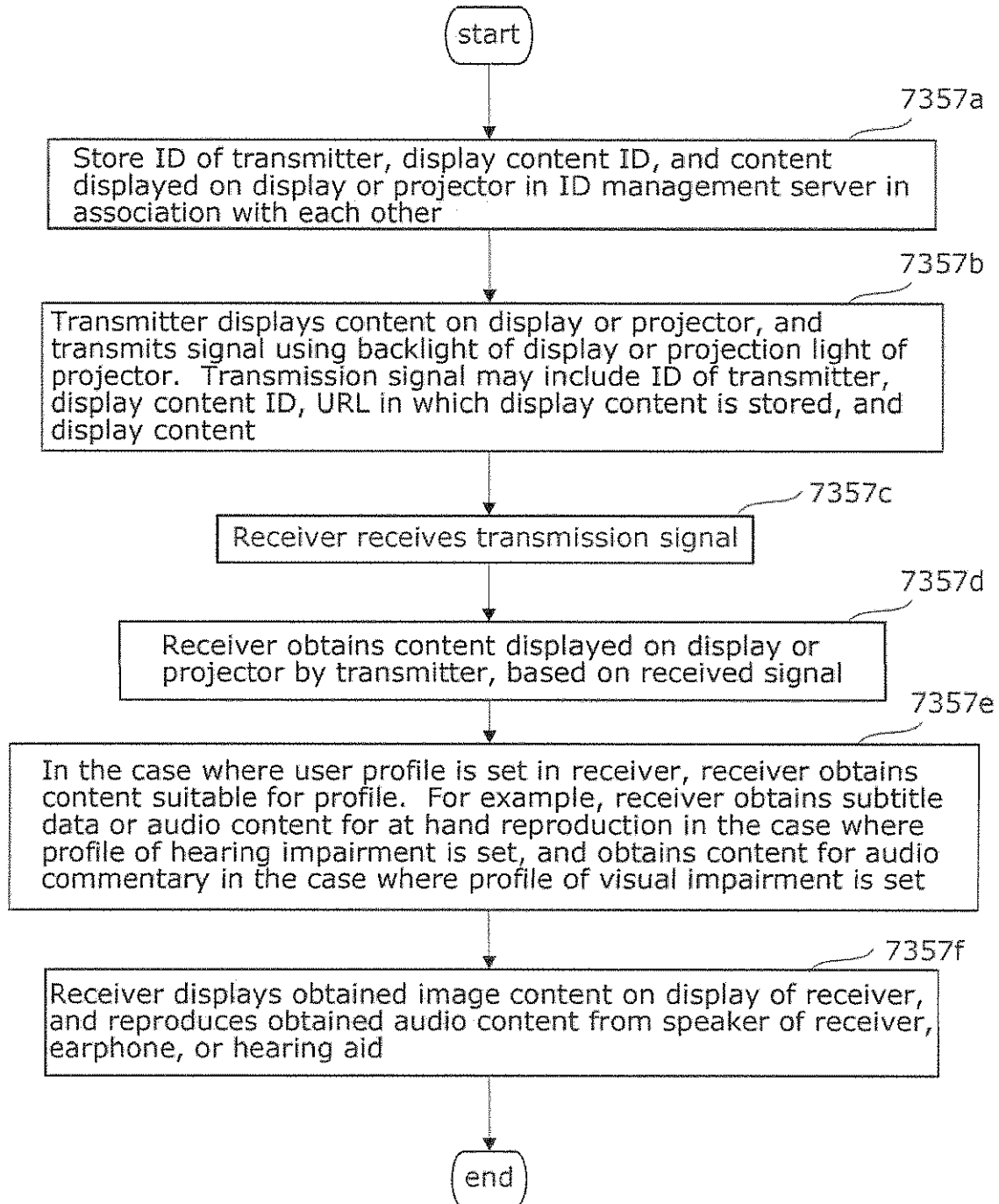


FIG. 324

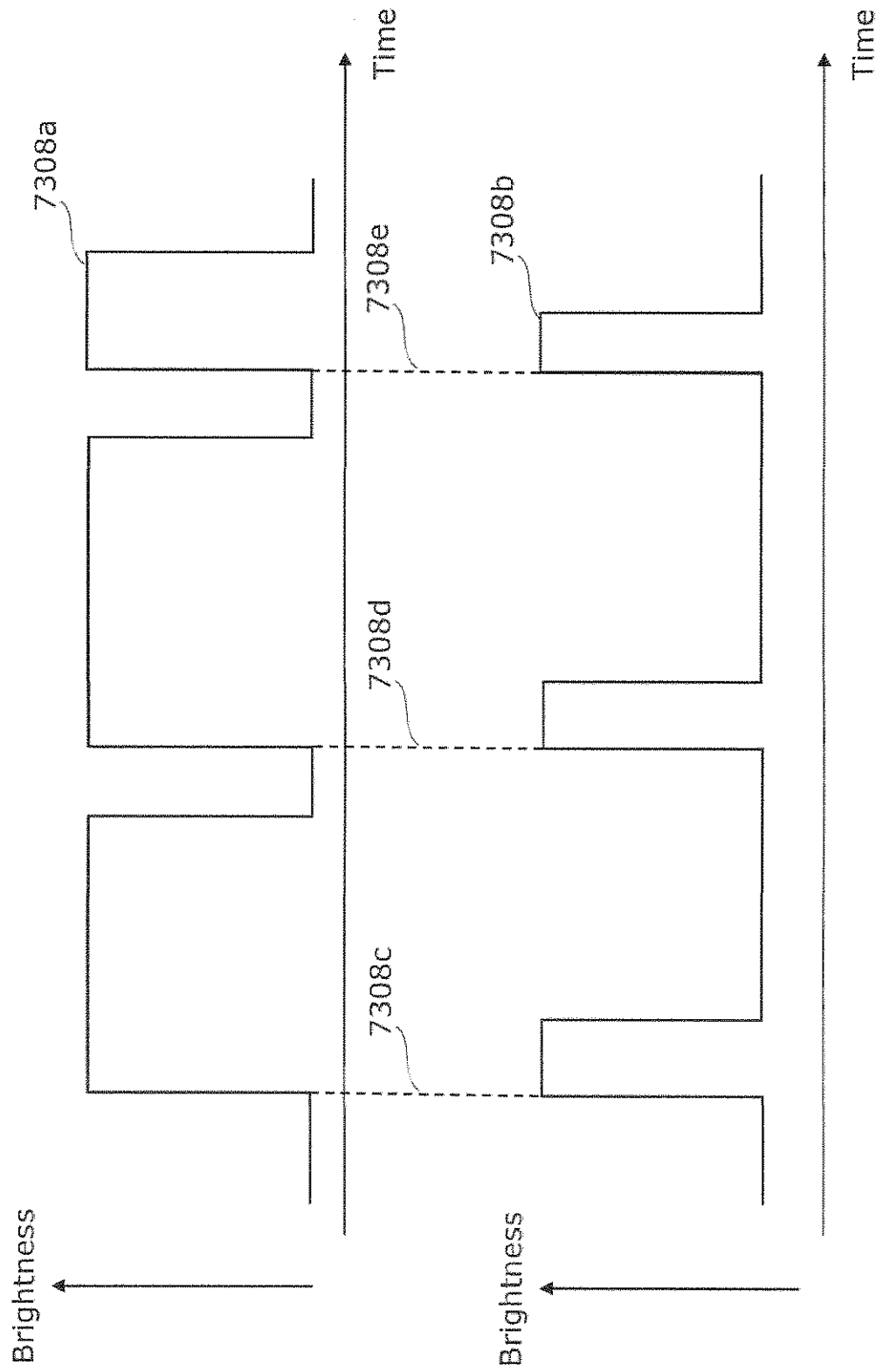


FIG. 325



FIG. 326

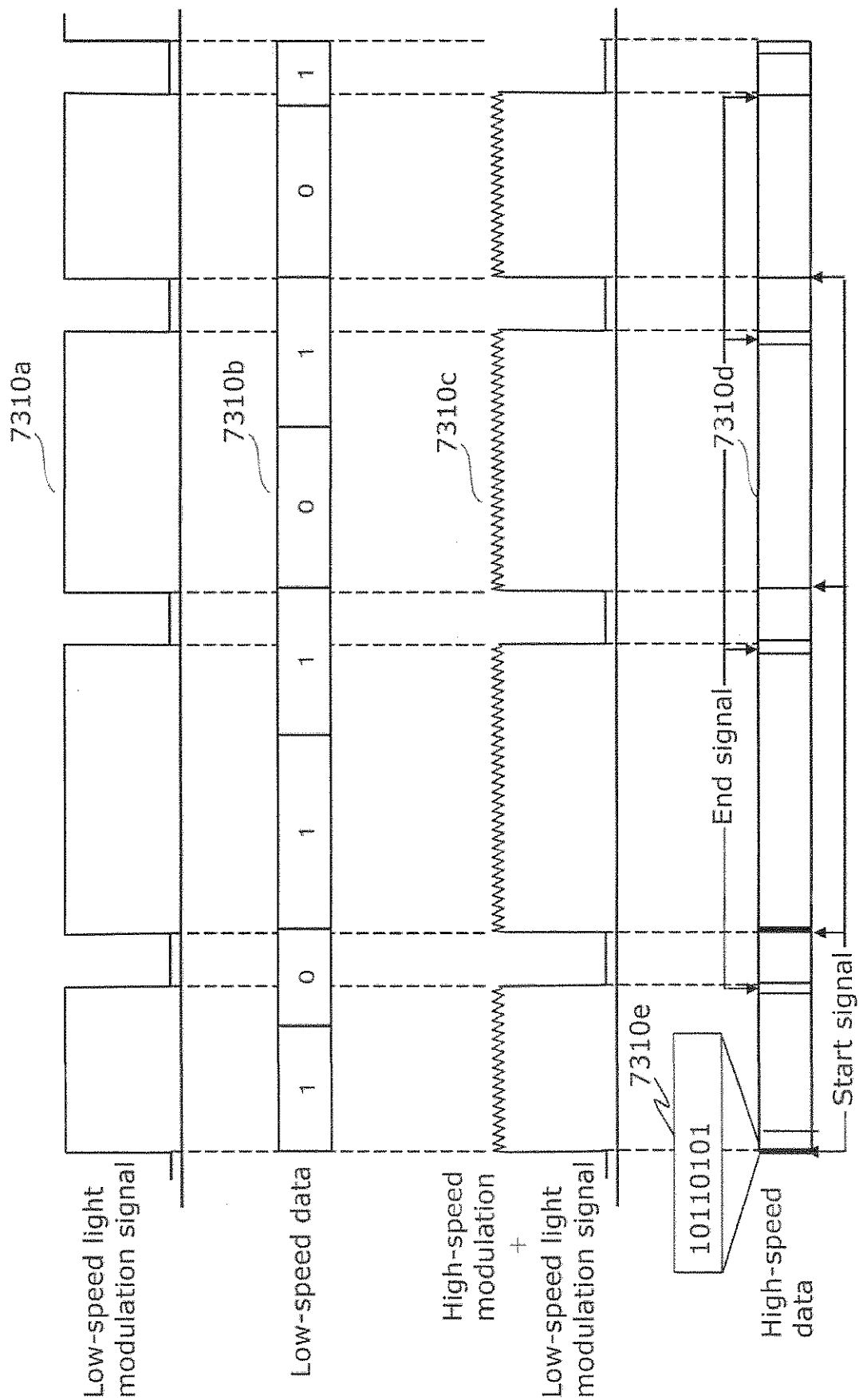


FIG. 327A

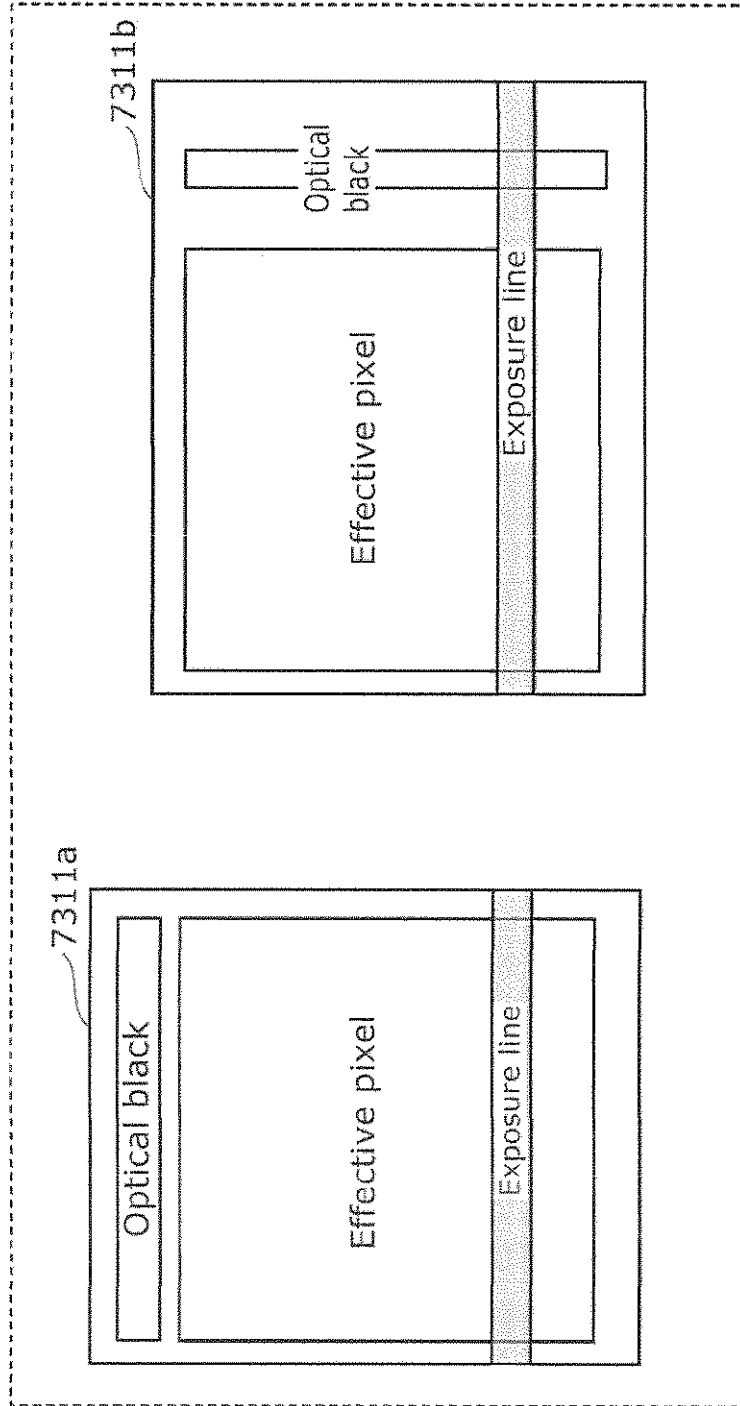


FIG. 327B

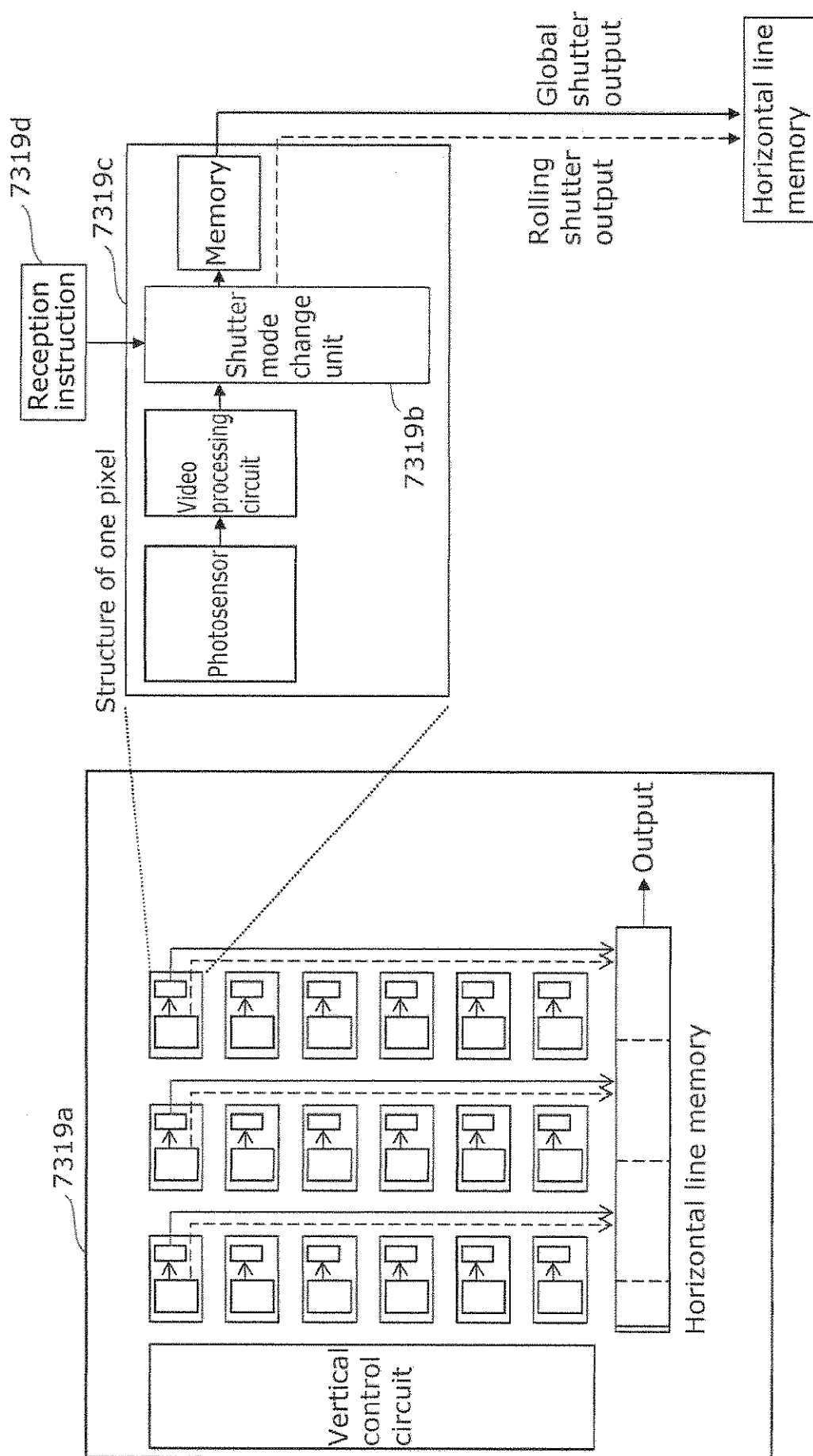


FIG. 327C

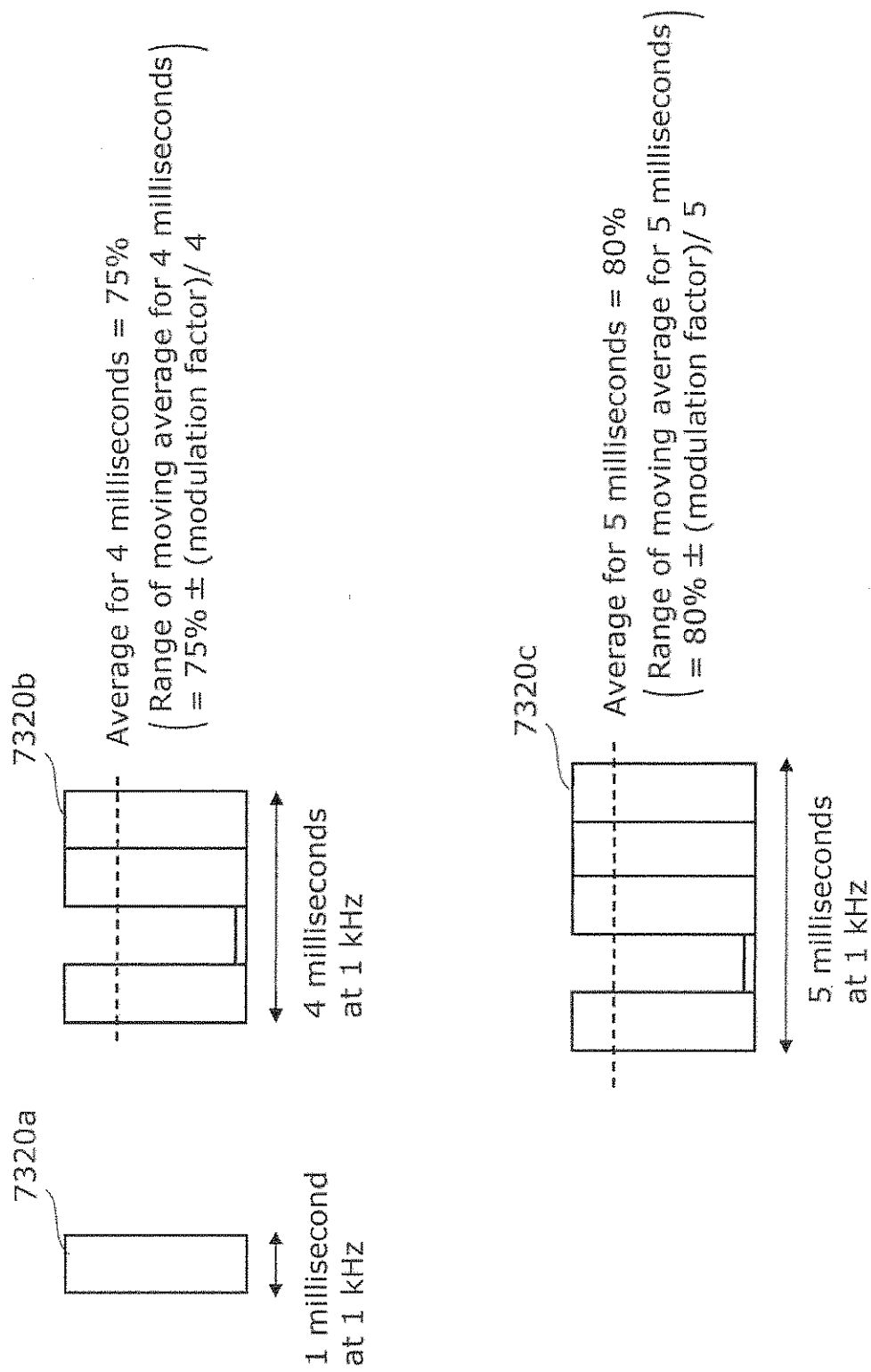


FIG. 327D

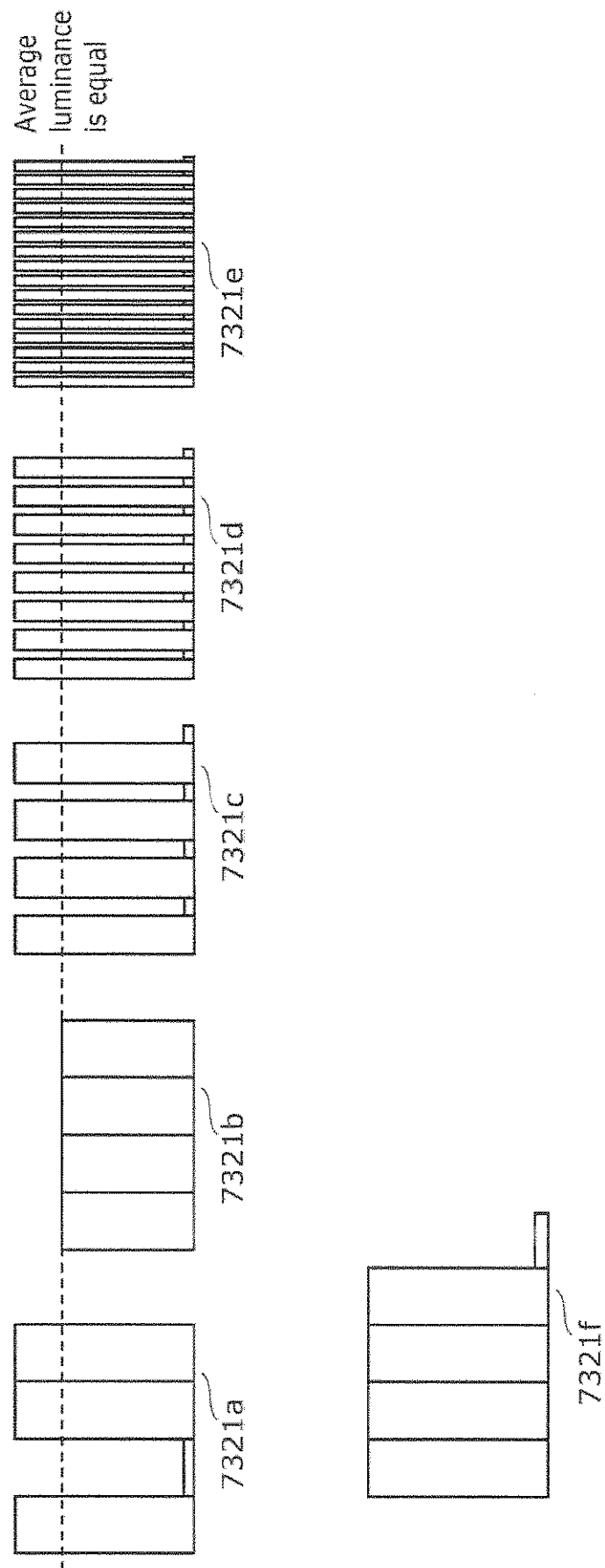


FIG. 328A

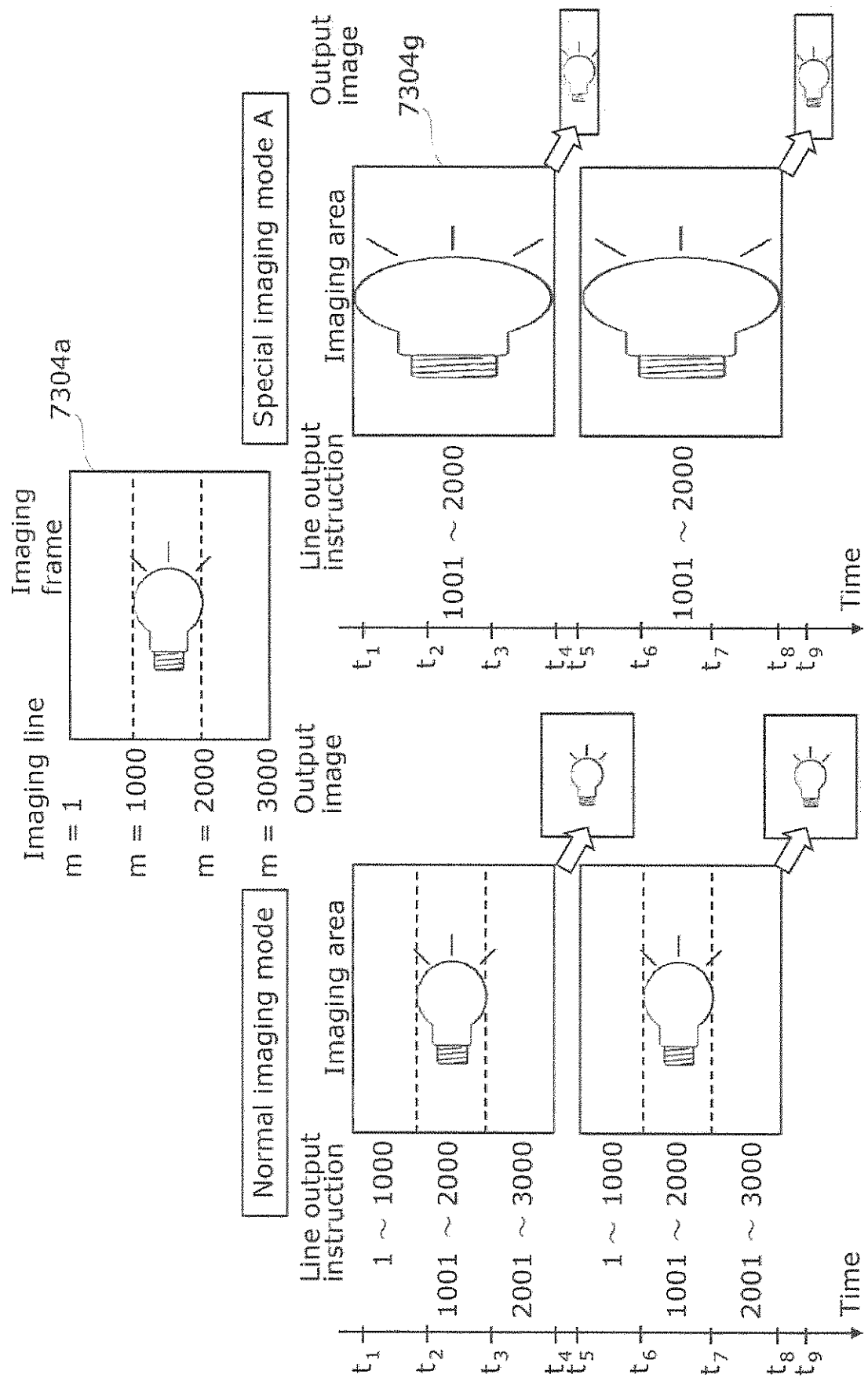


FIG. 328B

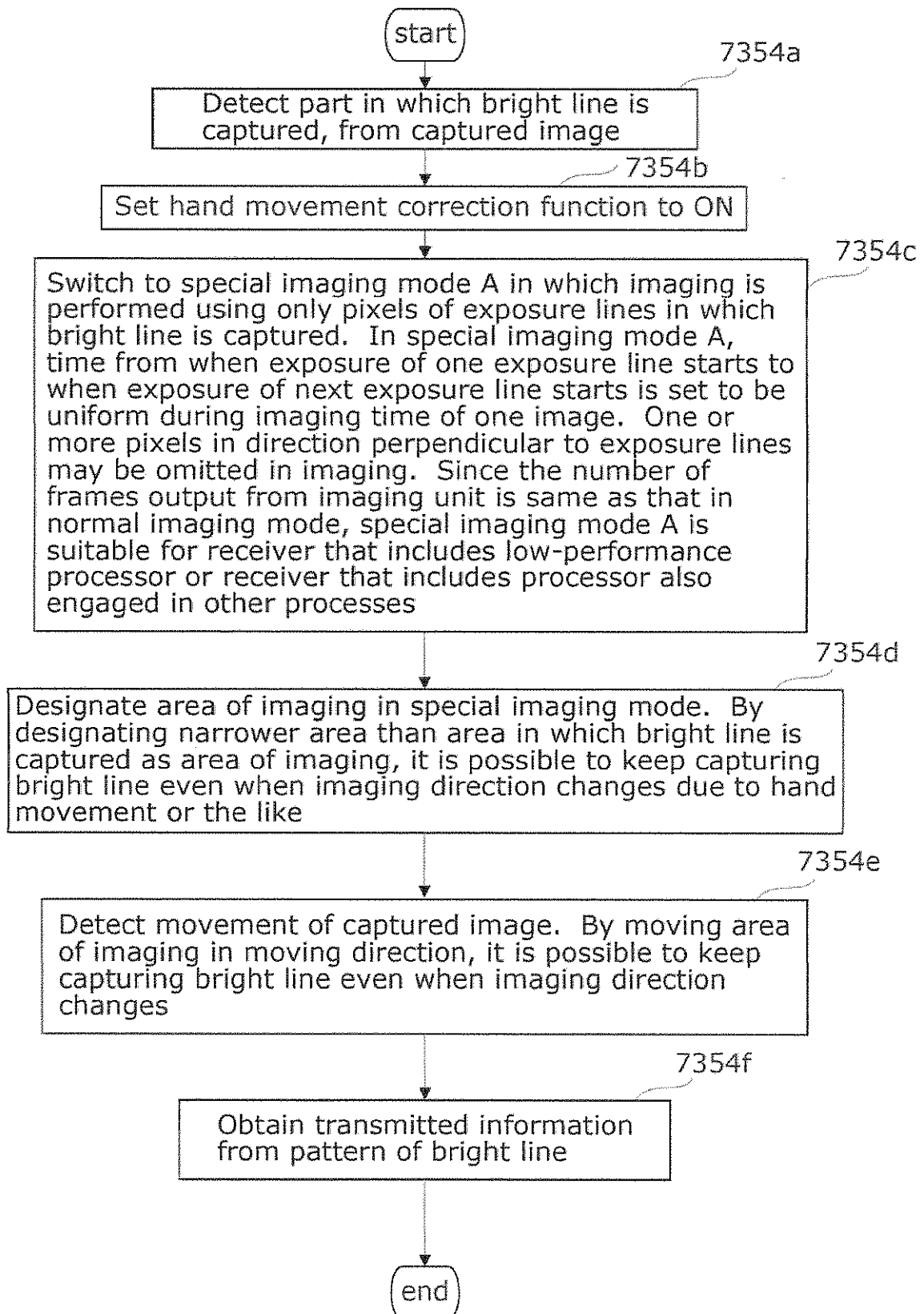


FIG. 329A

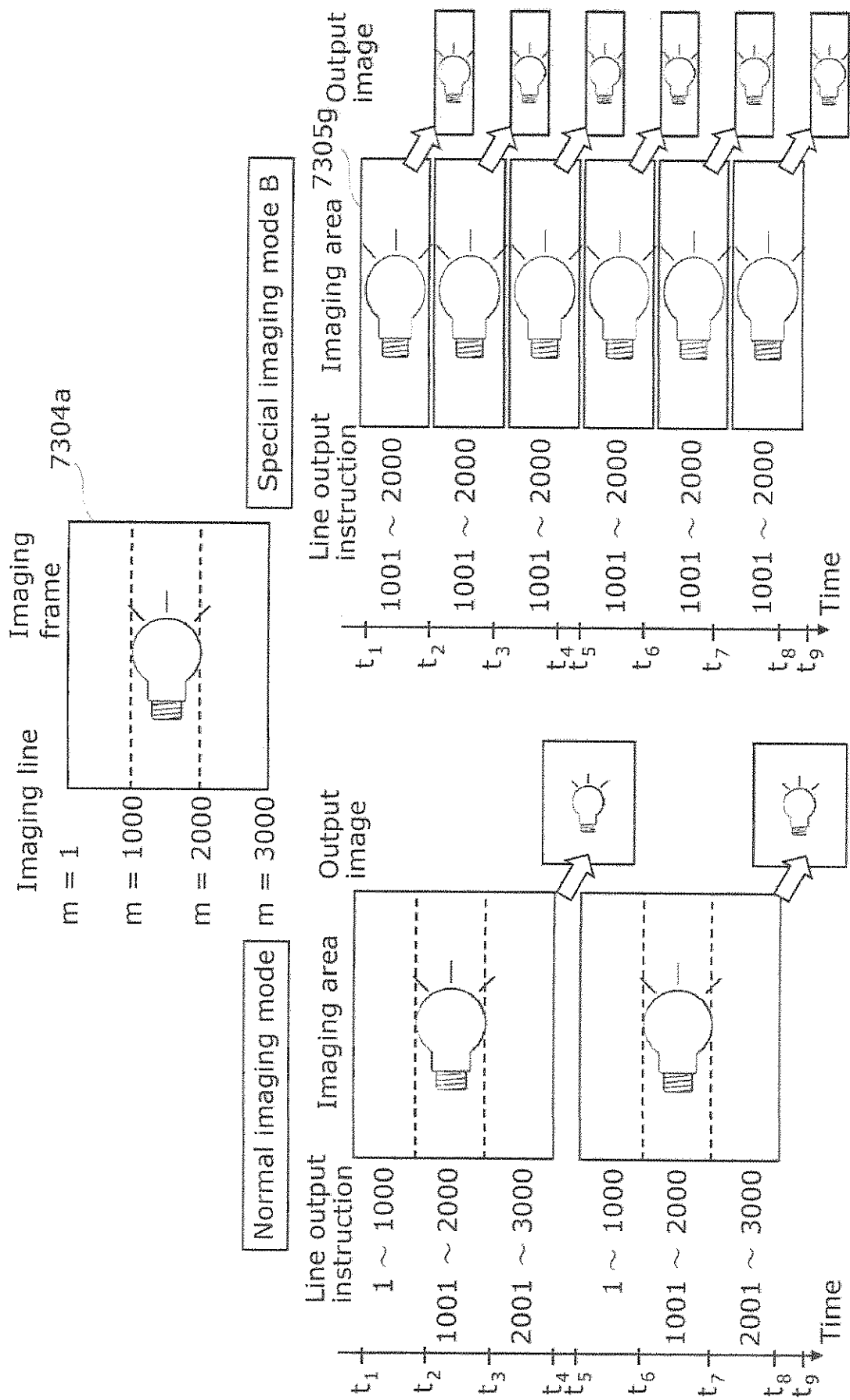


FIG. 329B

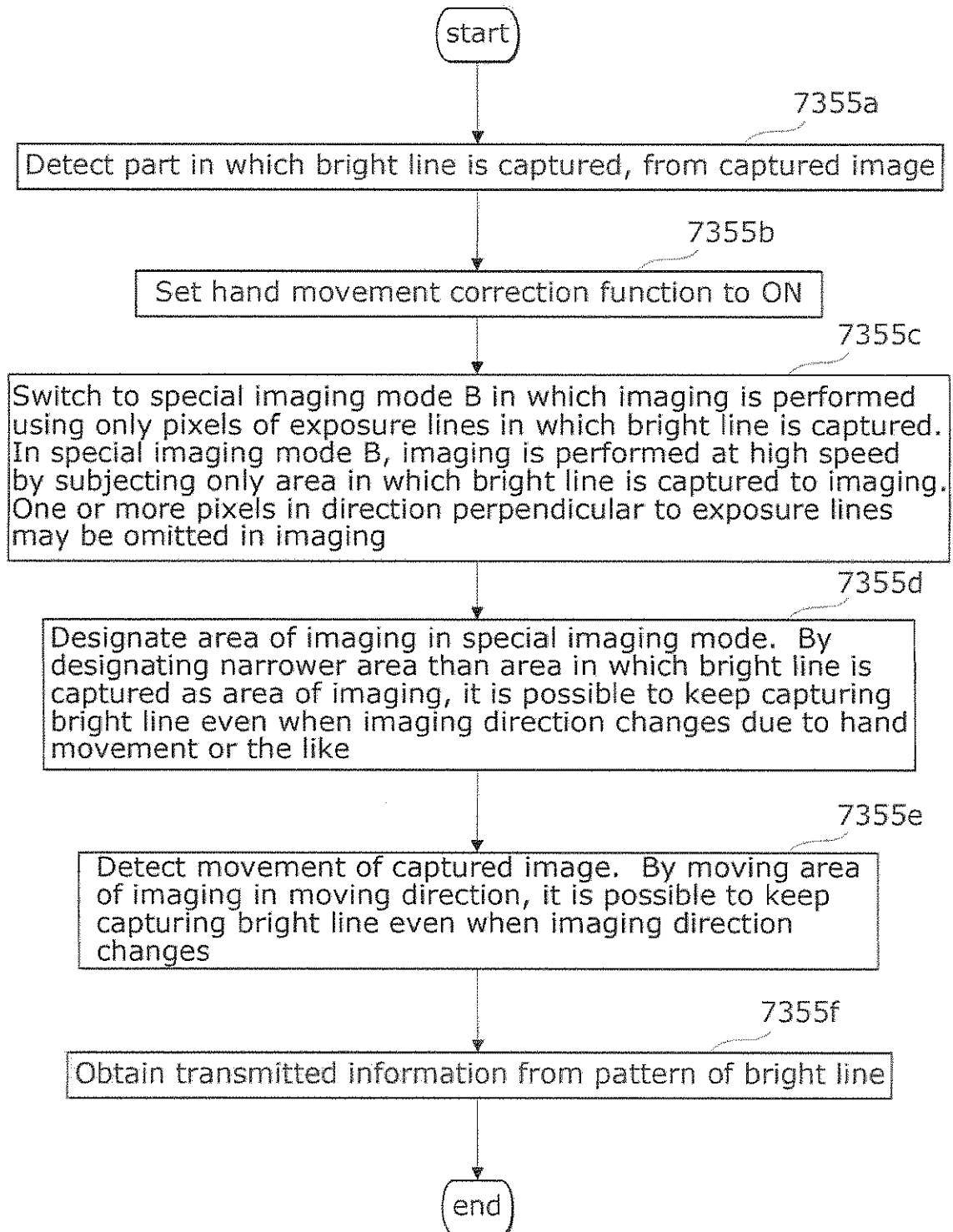


FIG. 330A

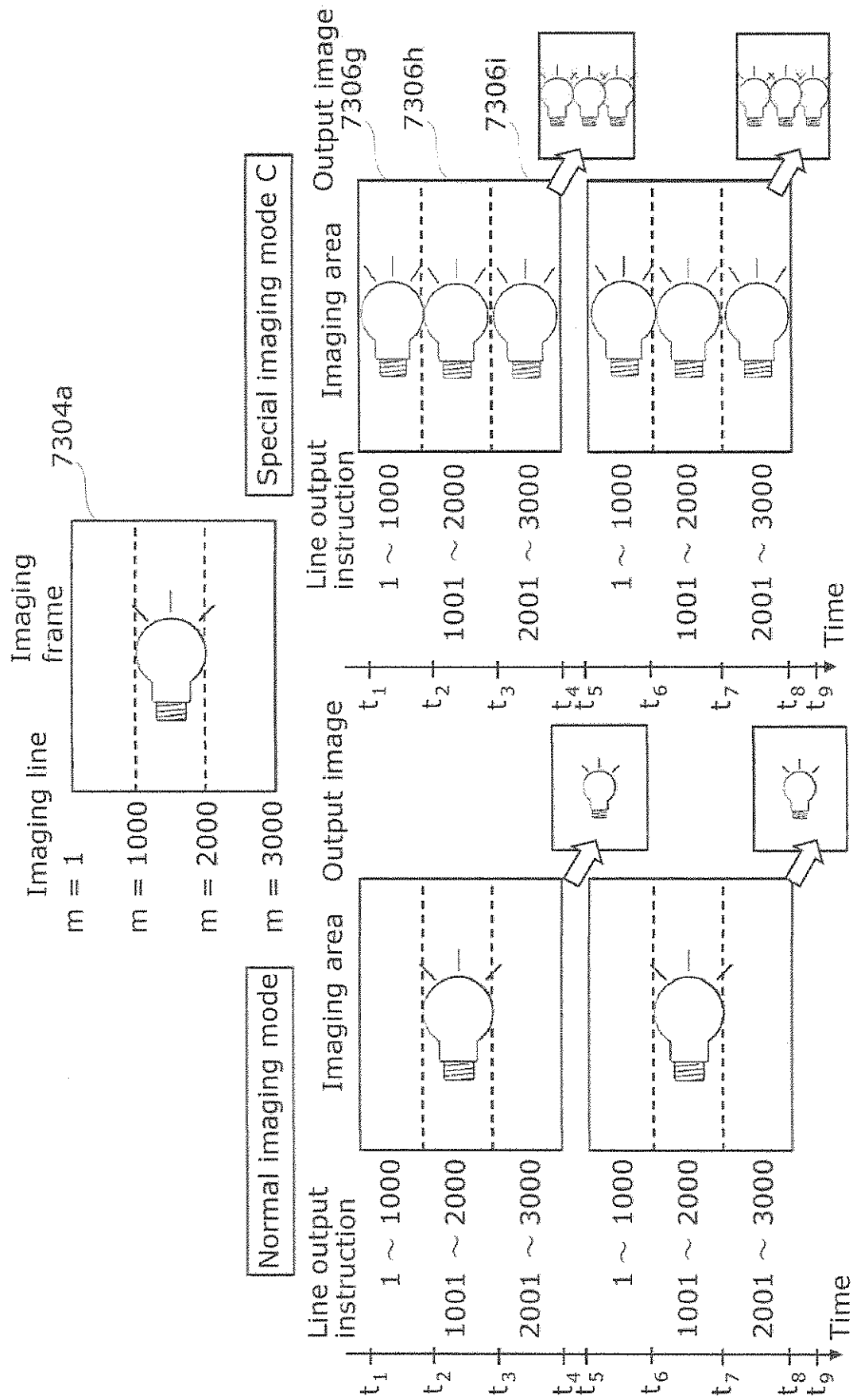


FIG. 330B

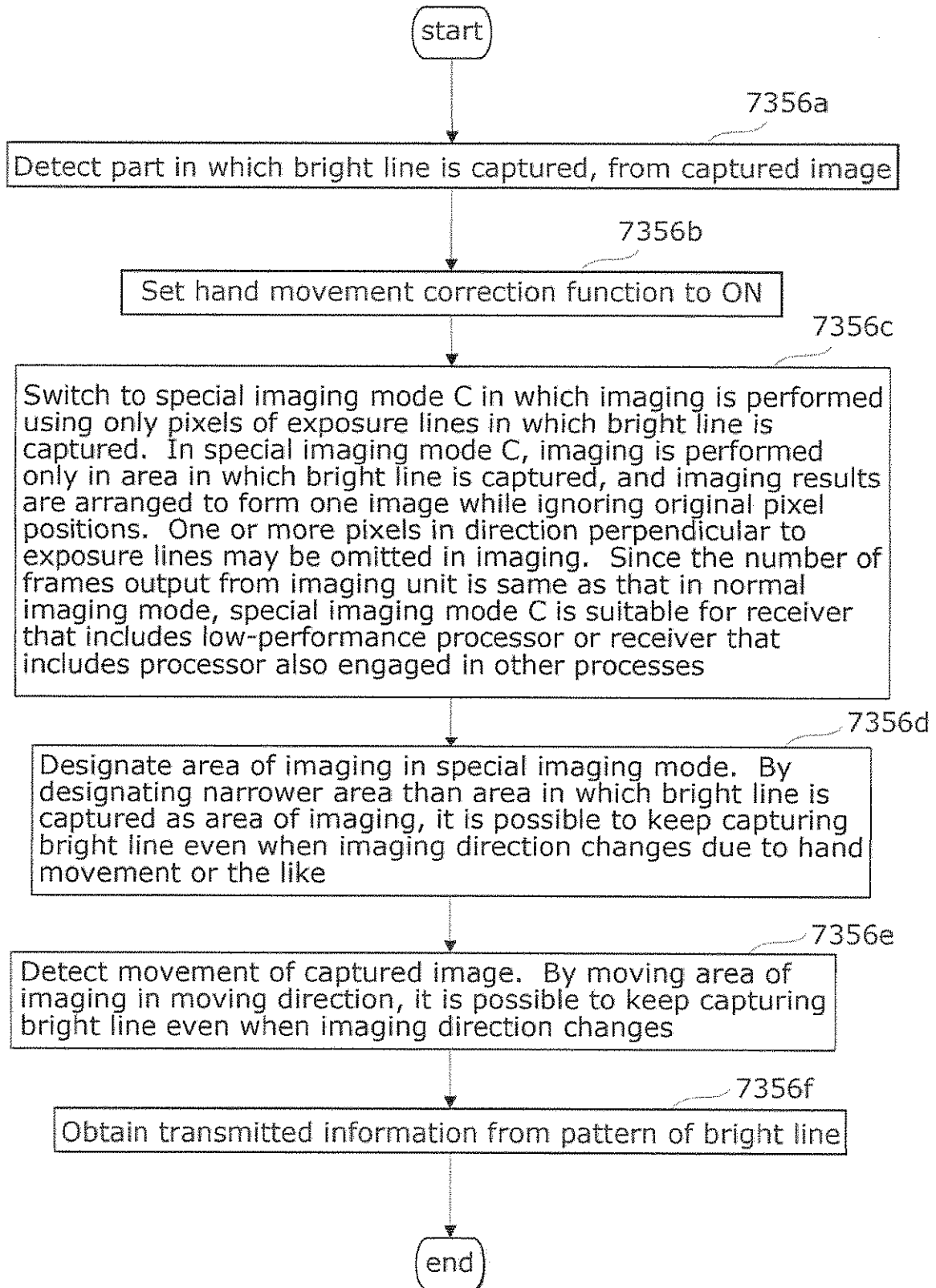


FIG. 331A

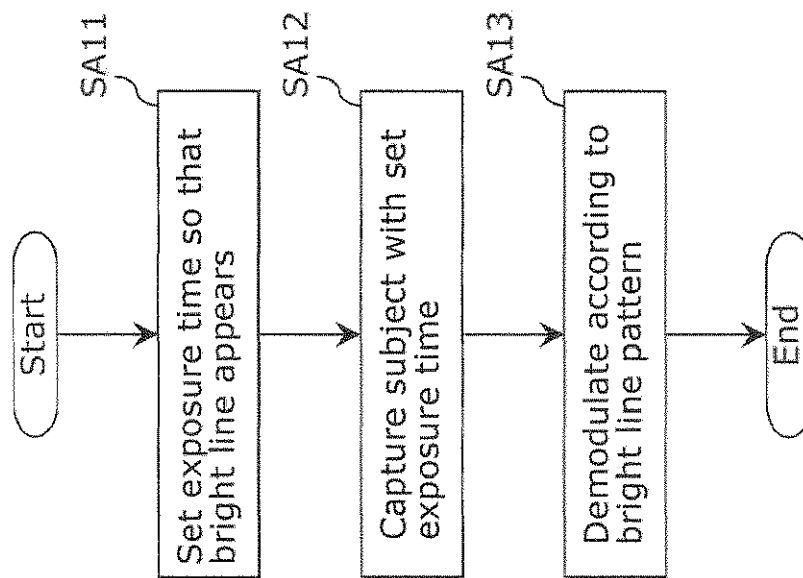


FIG. 331B

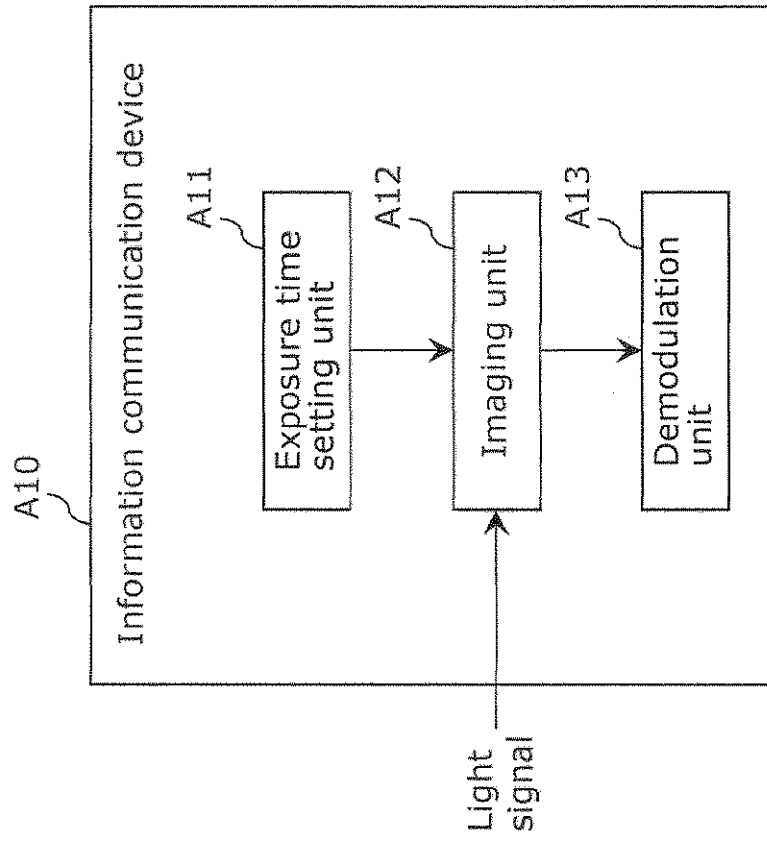


FIG. 331C

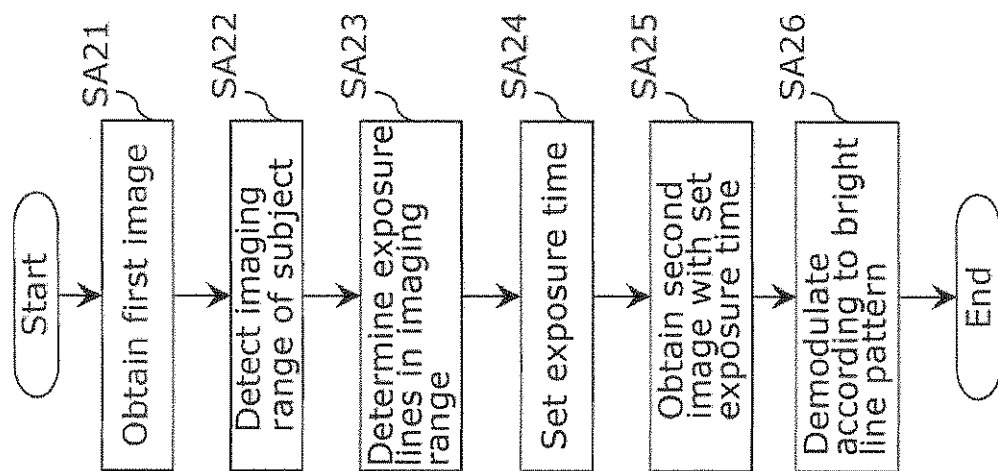


FIG. 331D

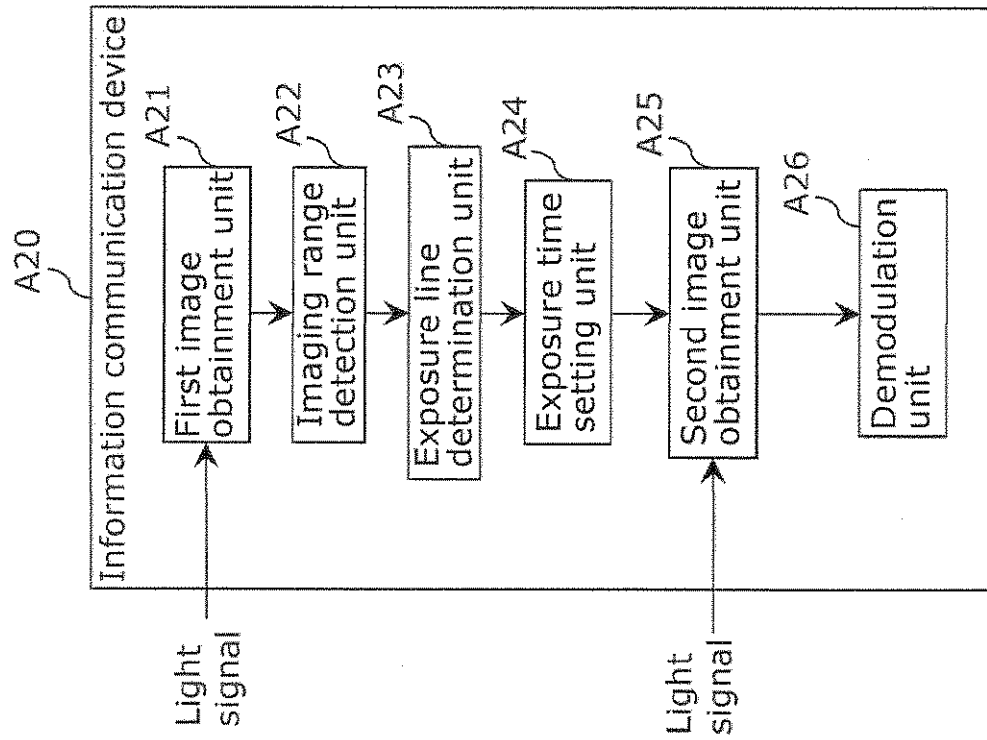


FIG. 332

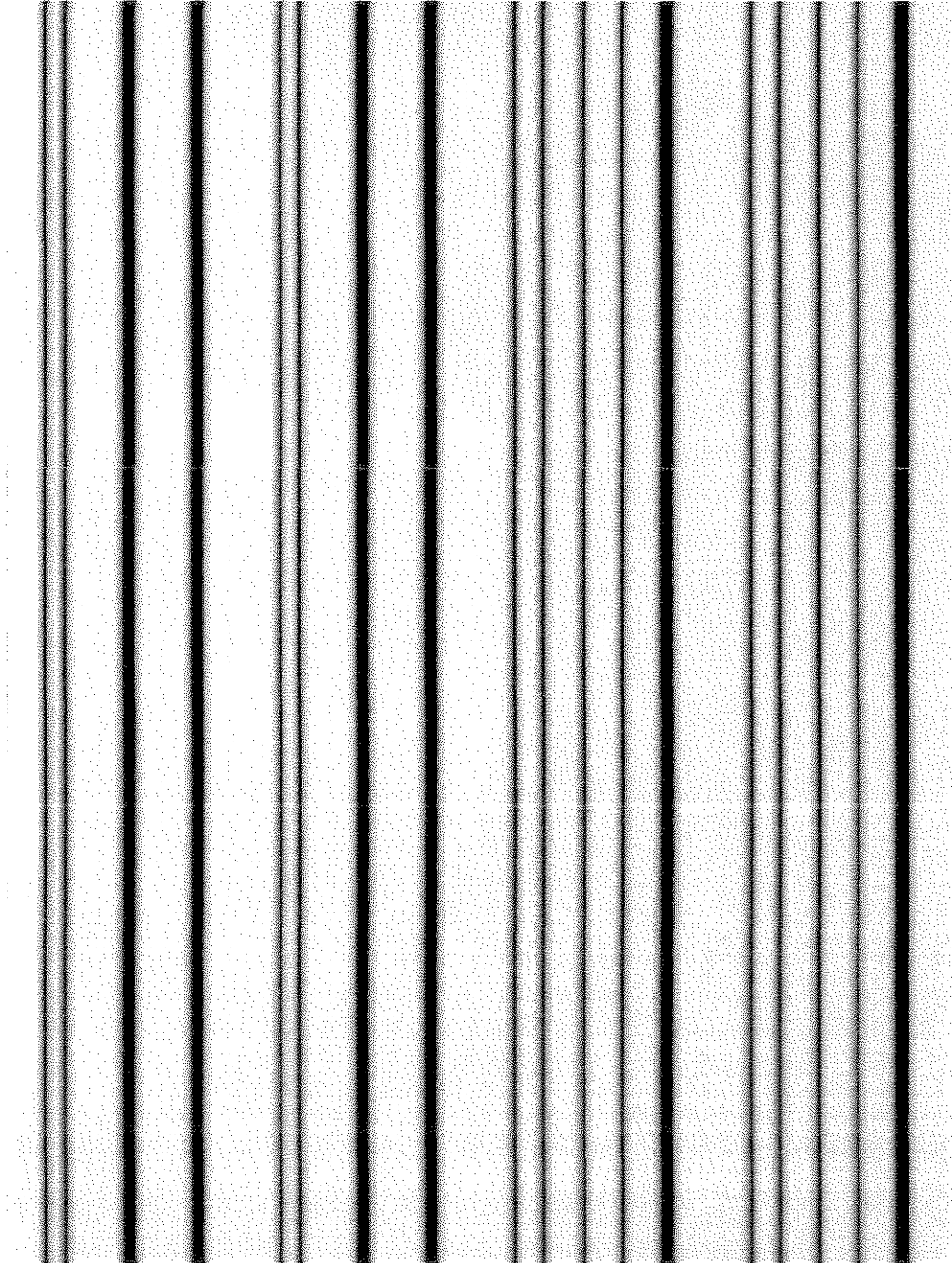


FIG. 333A

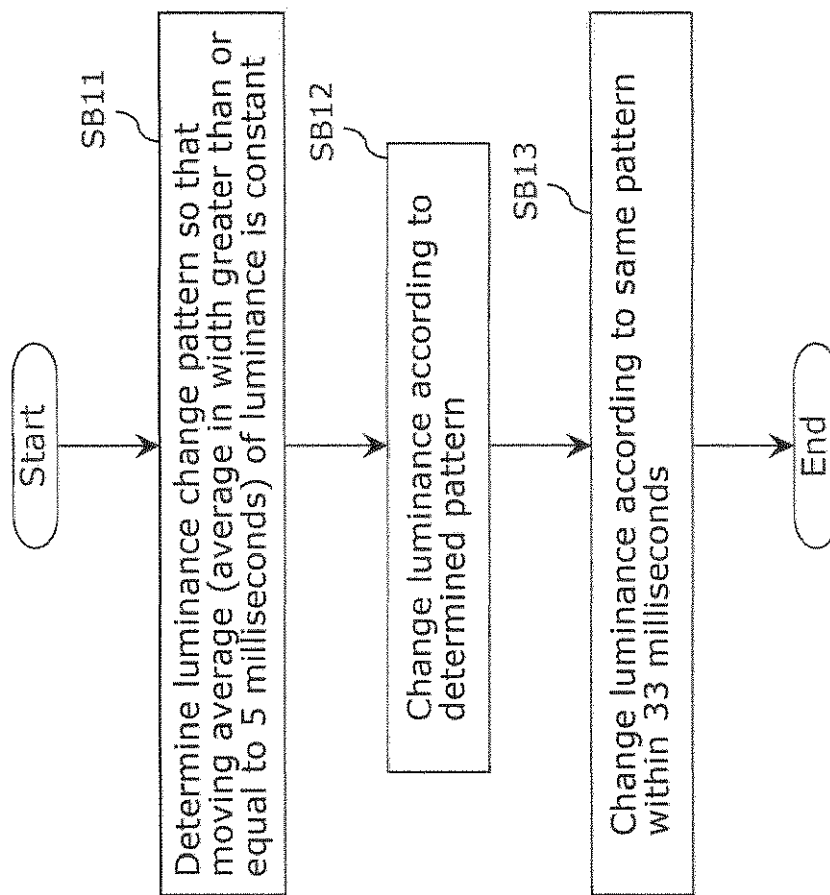


FIG. 333B

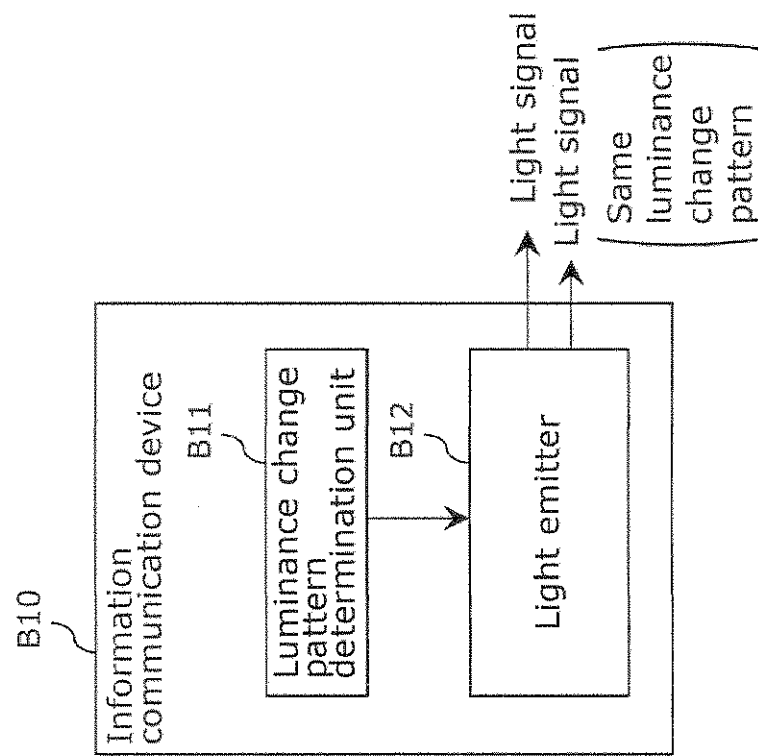


FIG. 334A

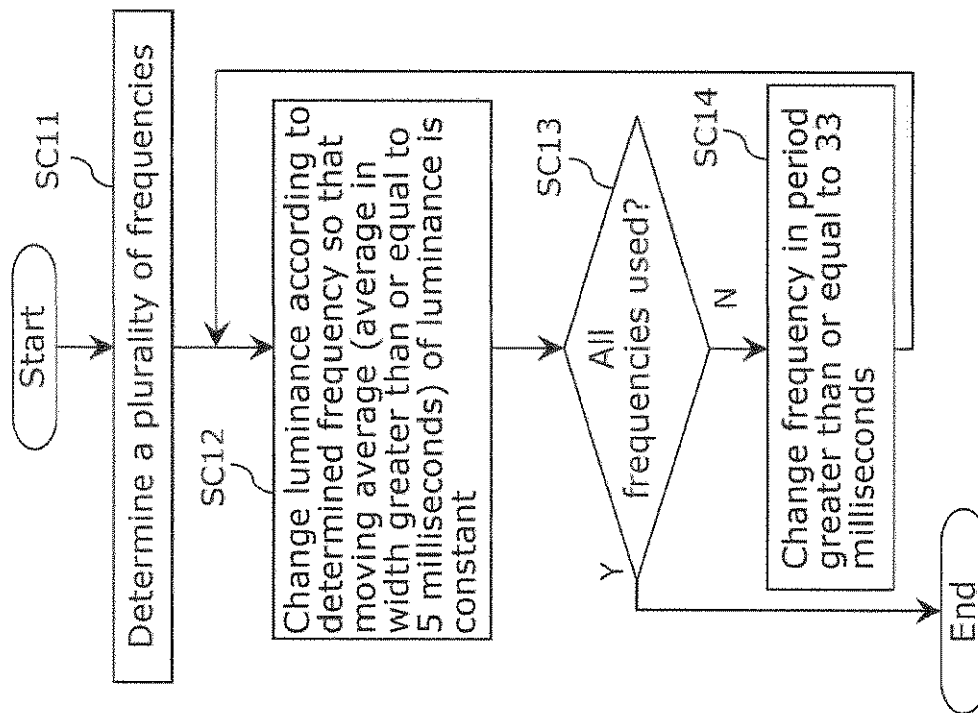


FIG. 334B

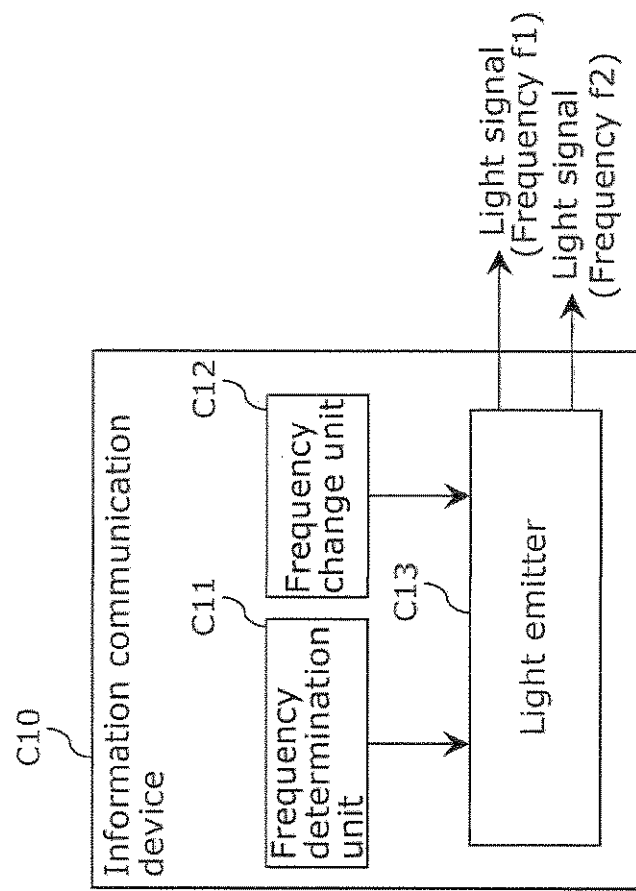


FIG. 335

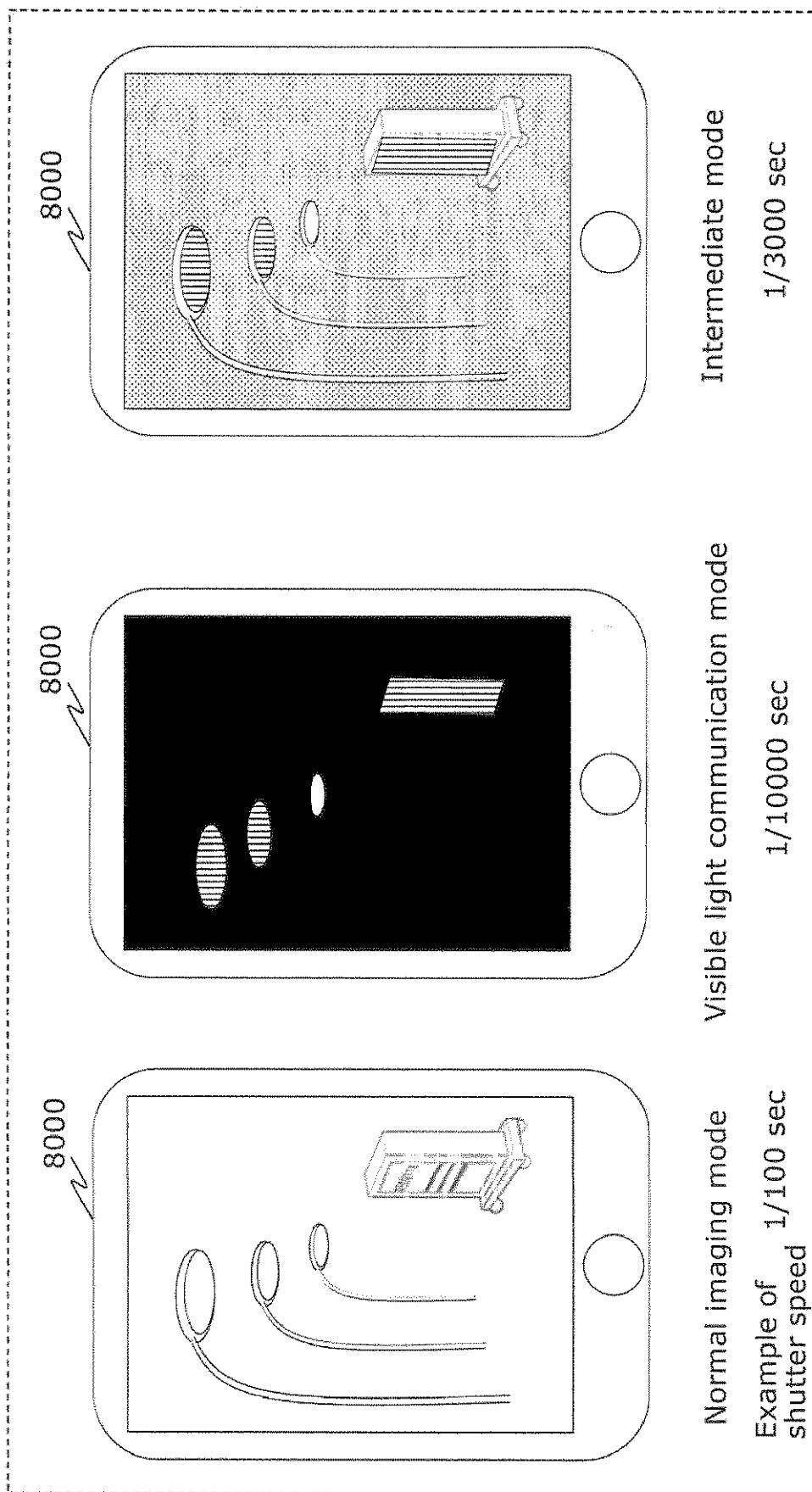


FIG. 336

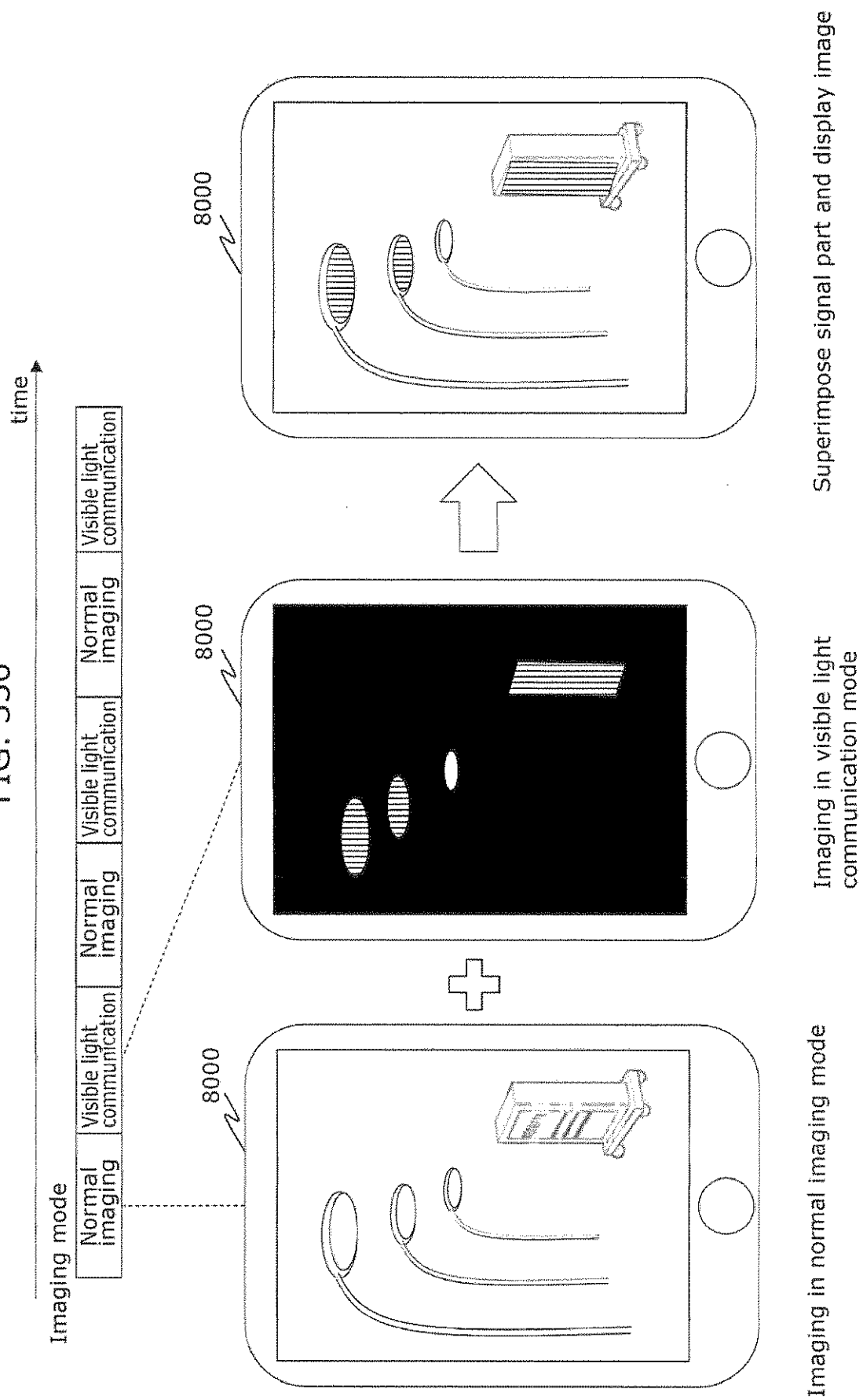


FIG. 337

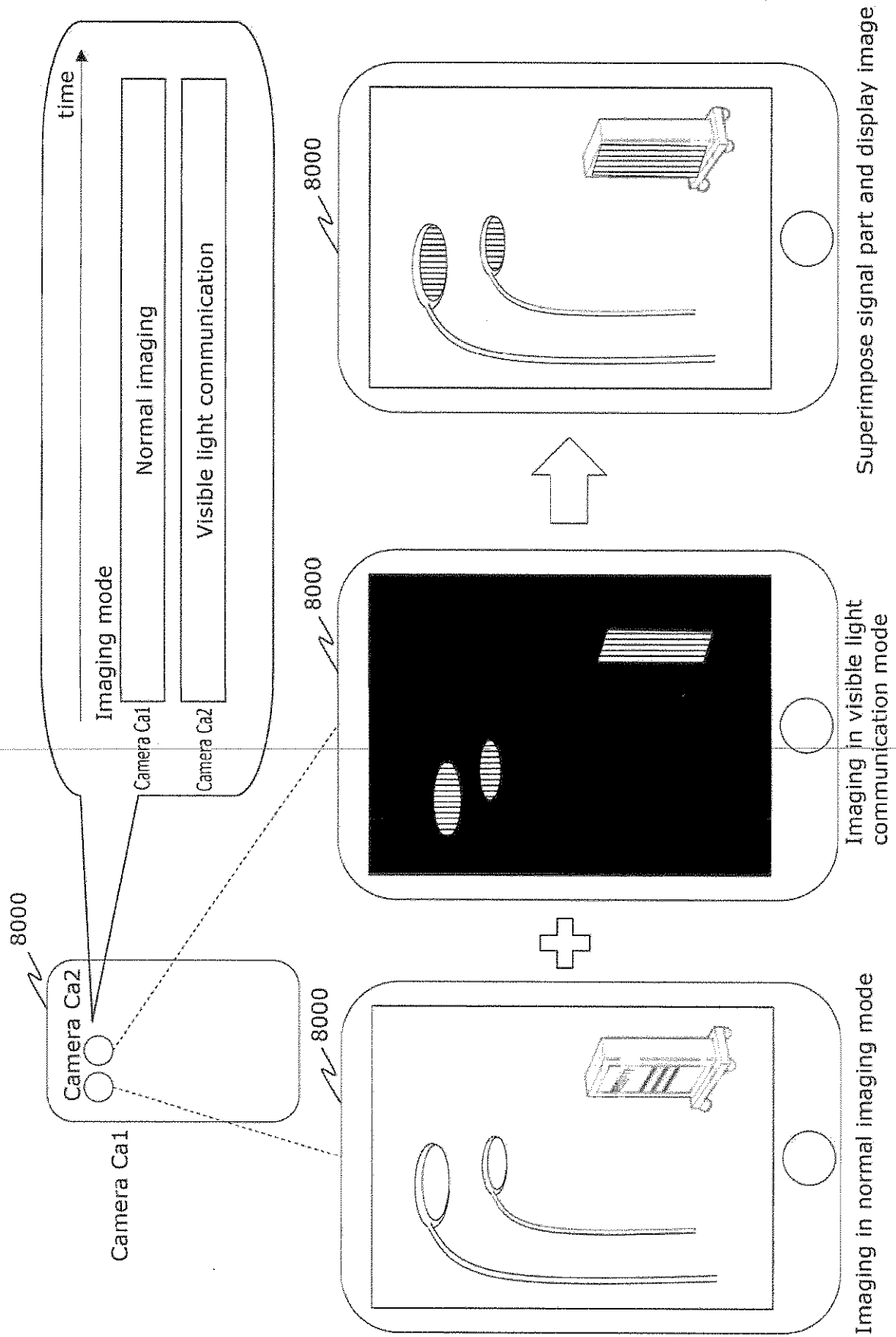


FIG. 338A

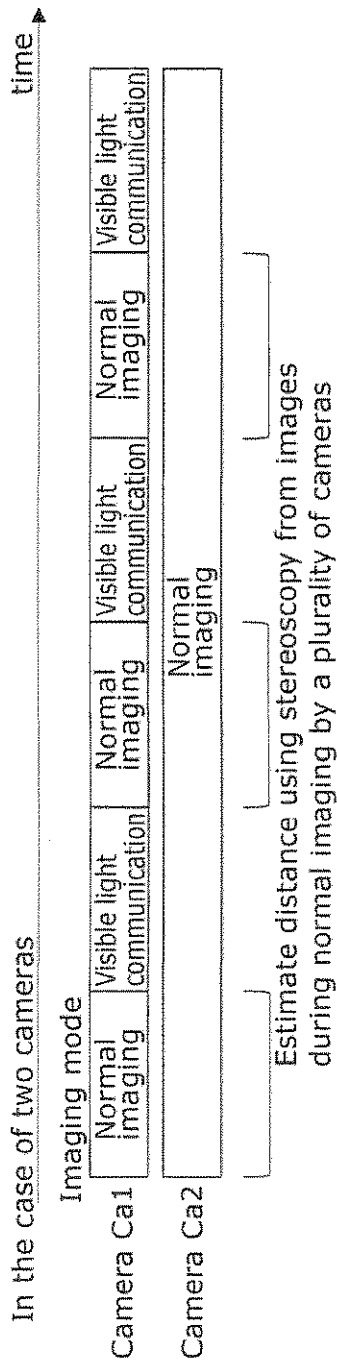


FIG. 338B

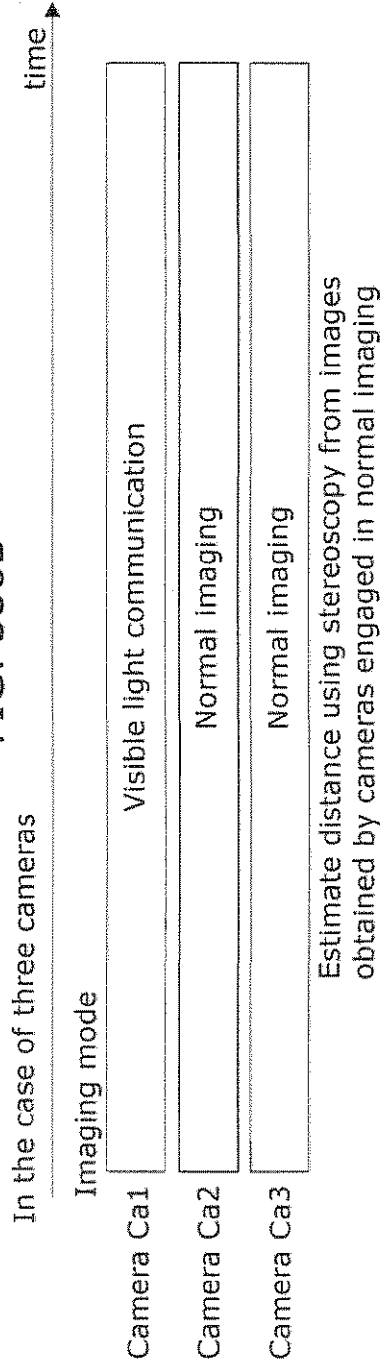


FIG. 338C

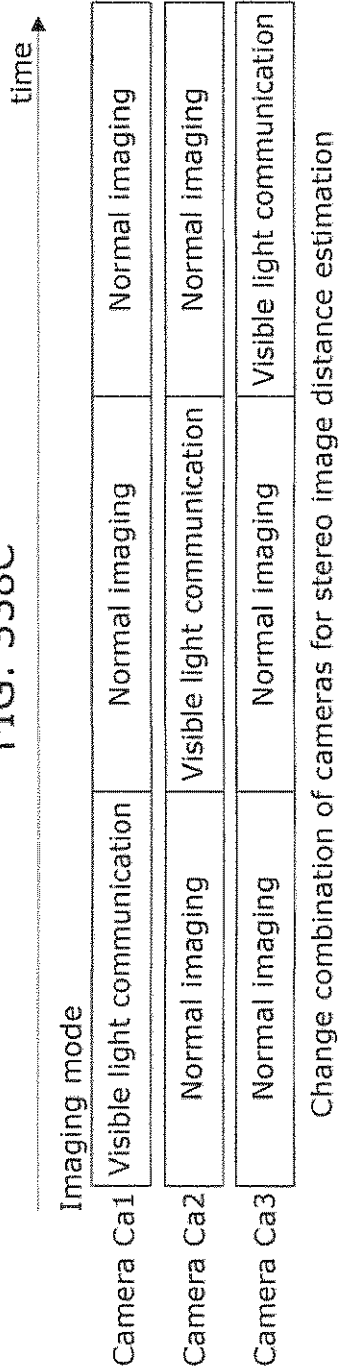
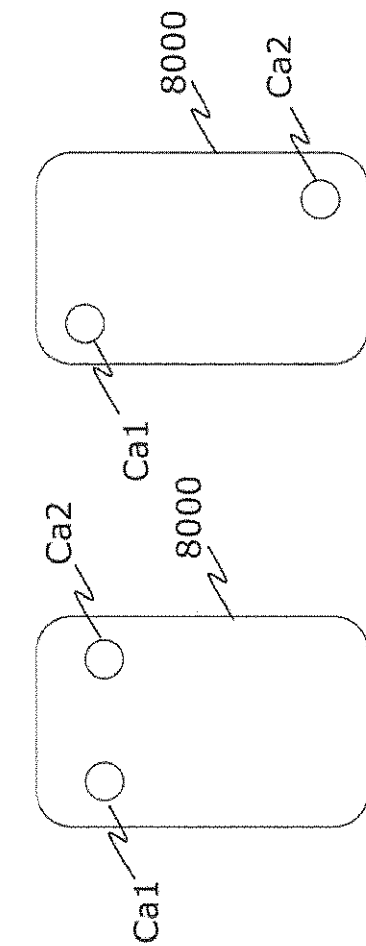


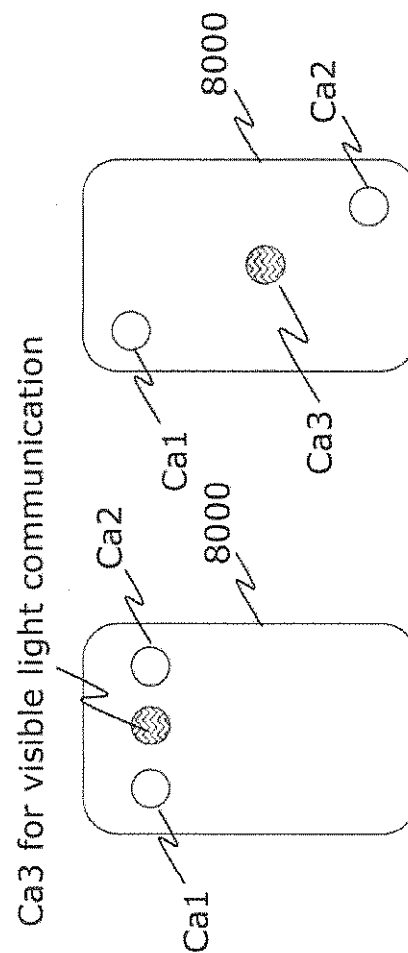
FIG. 339A



In the case of two cameras

Cameras are preferably away from each other in the case of performing stereo image distance estimation

FIG. 339B



In the case of three cameras

Perform stereo image distance estimation using cameras farthest away from each other, and perform visible light communication using other camera

FIG. 340

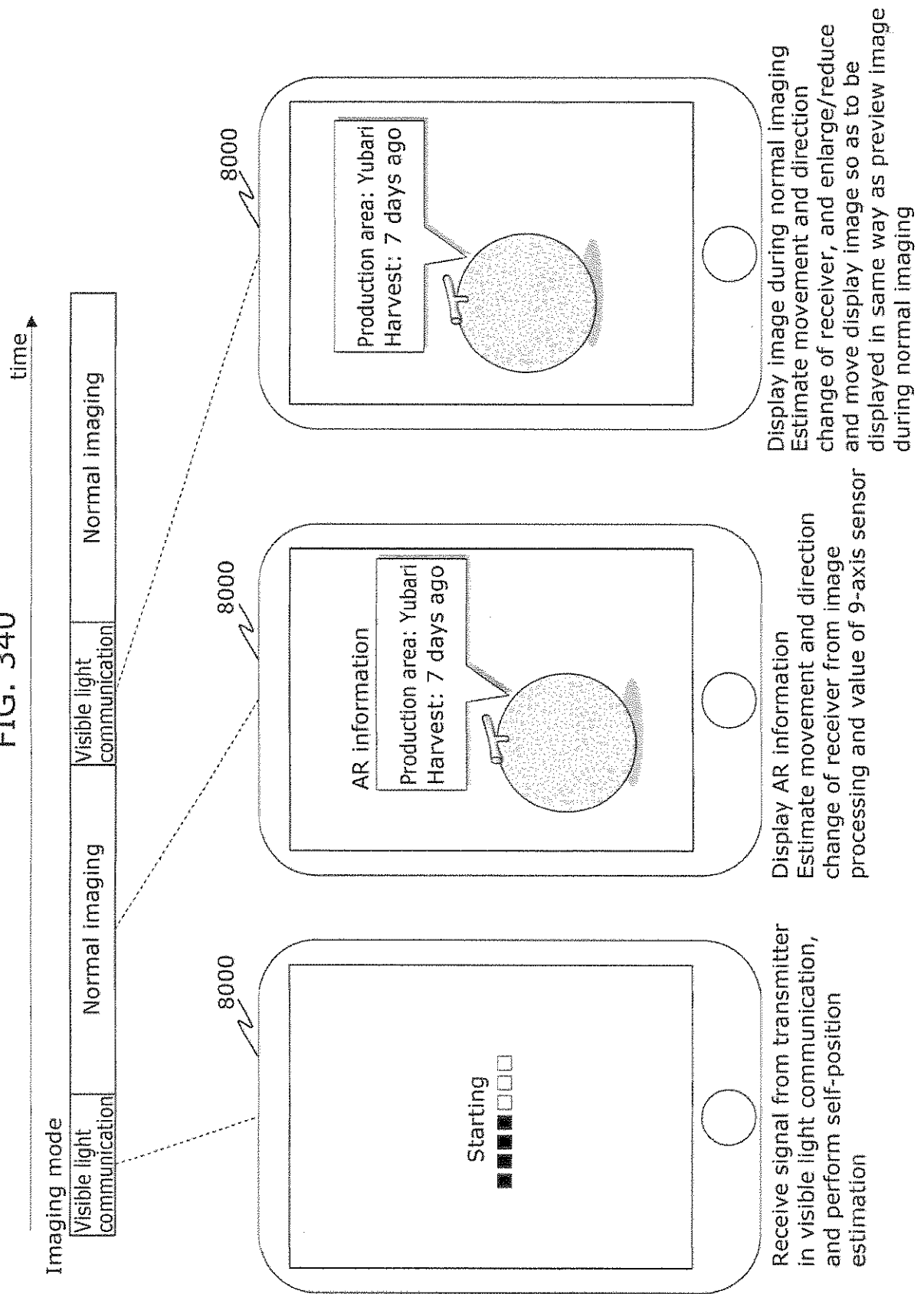


FIG. 341

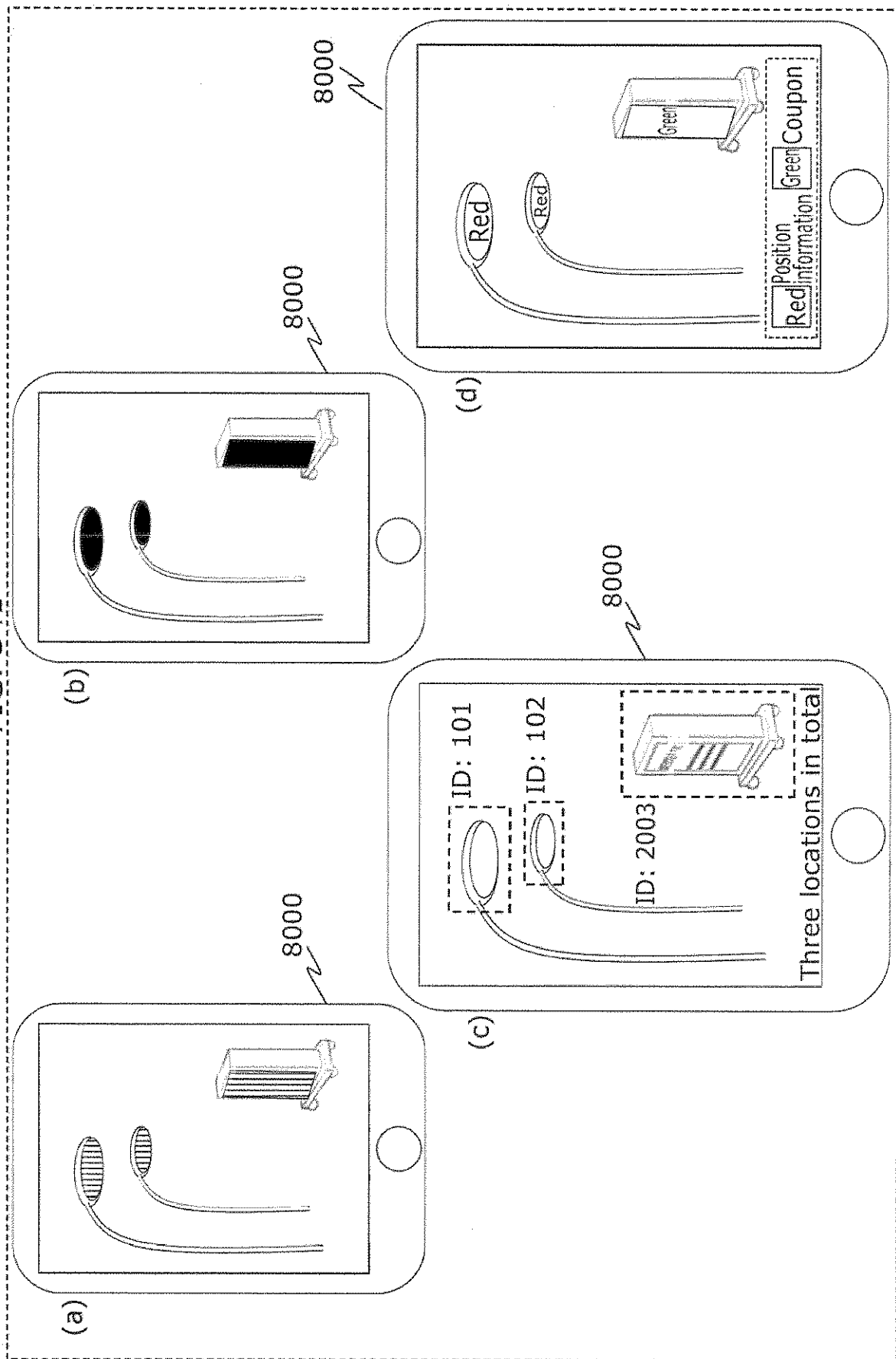


FIG. 342

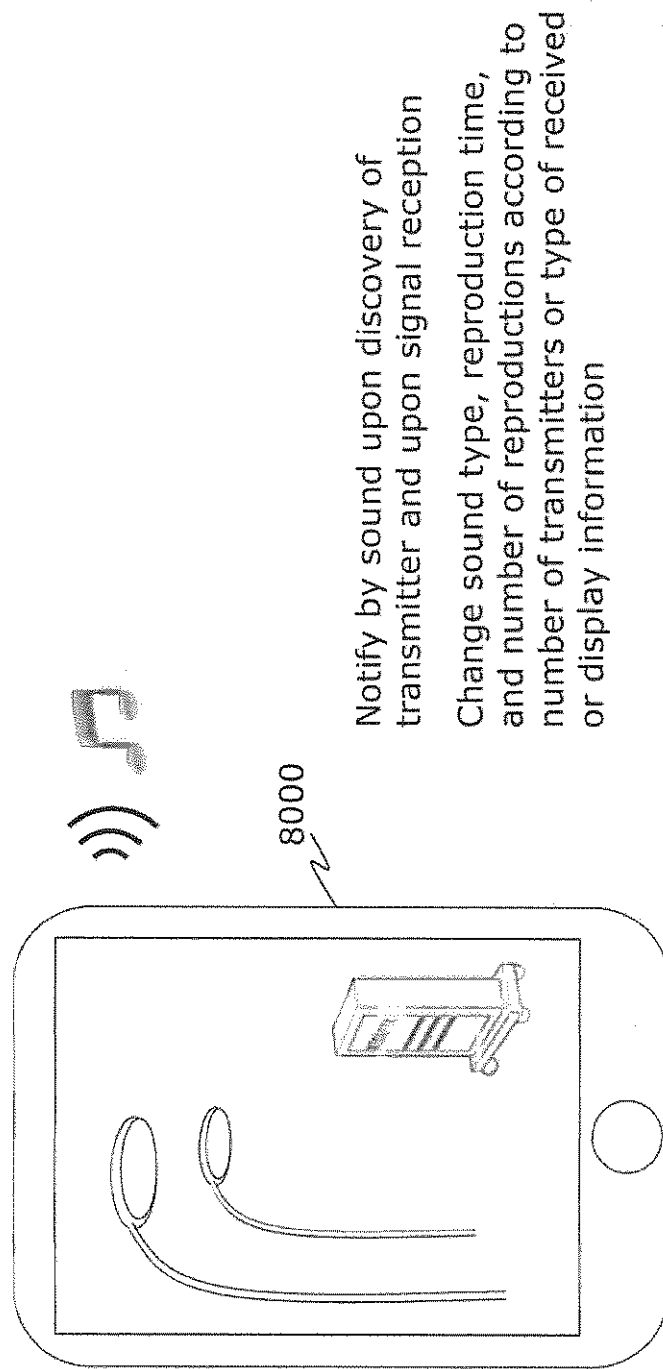


FIG. 343

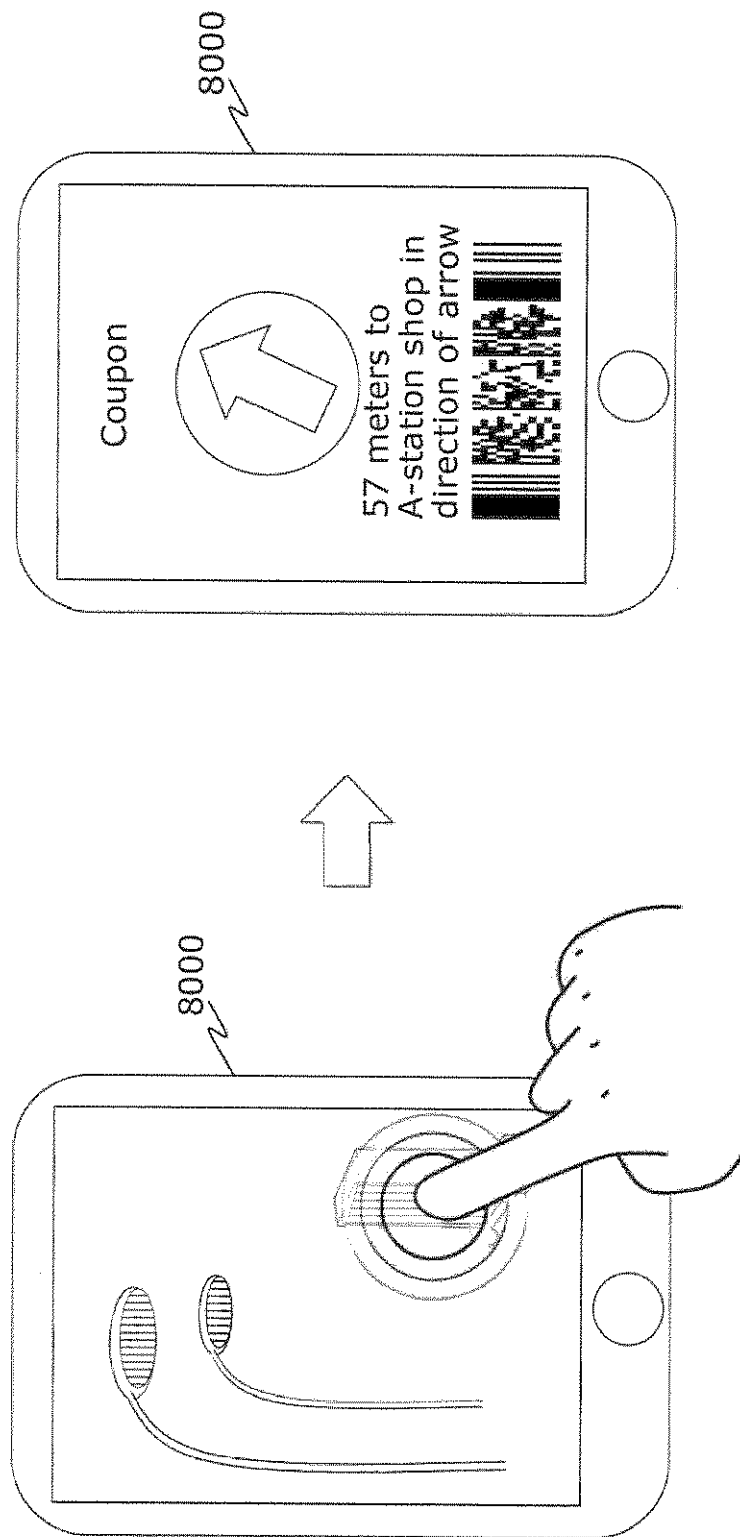


FIG. 344

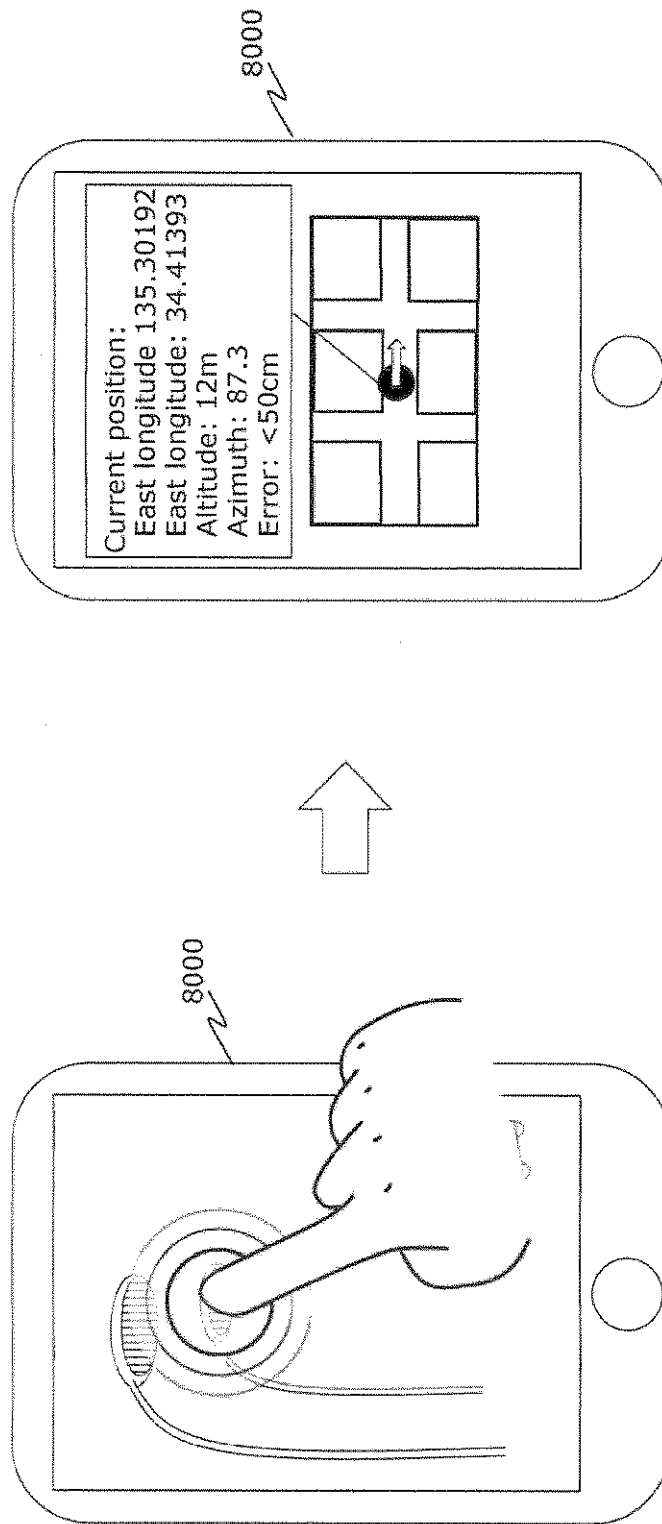


FIG. 345

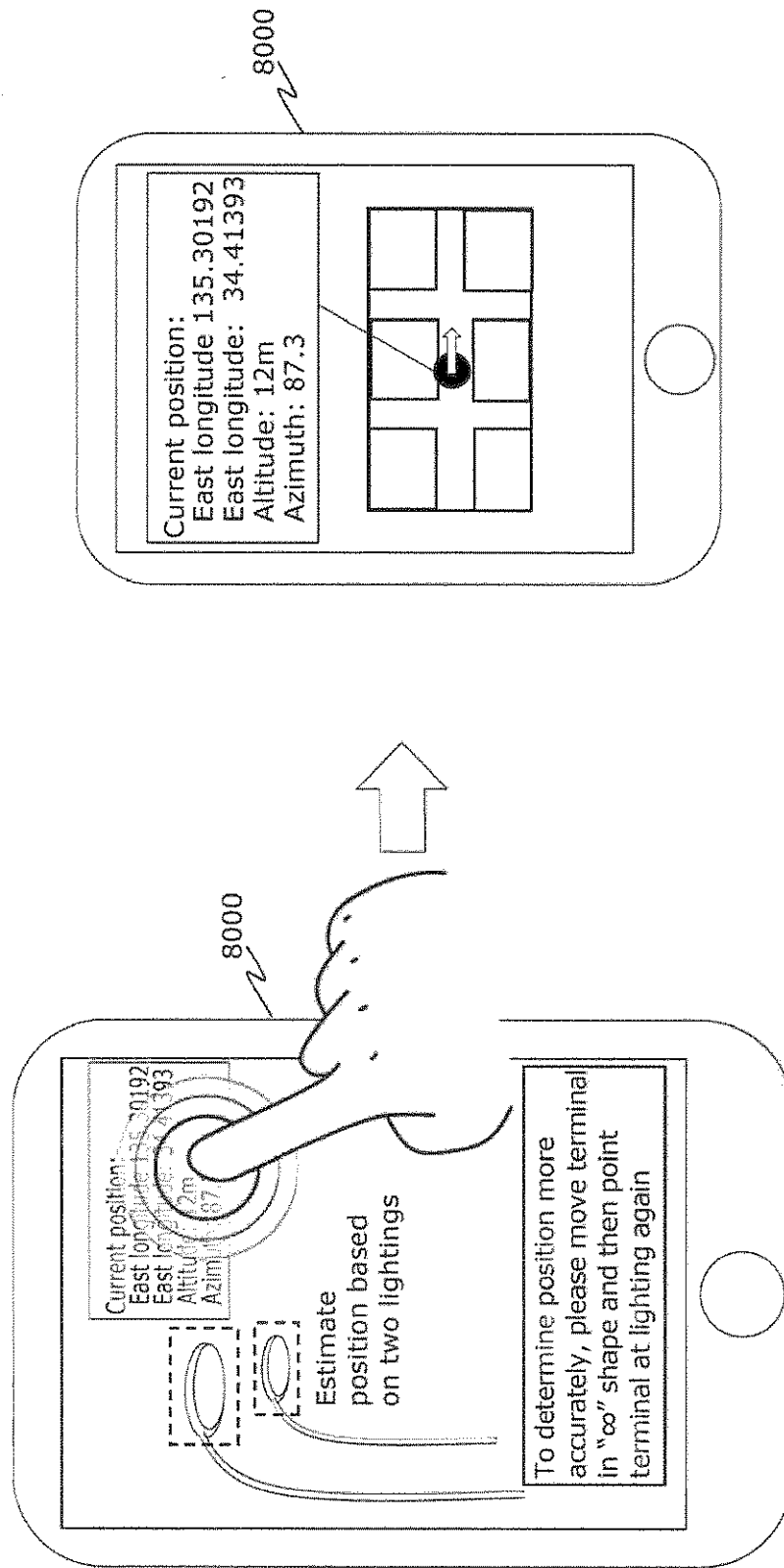


FIG. 346

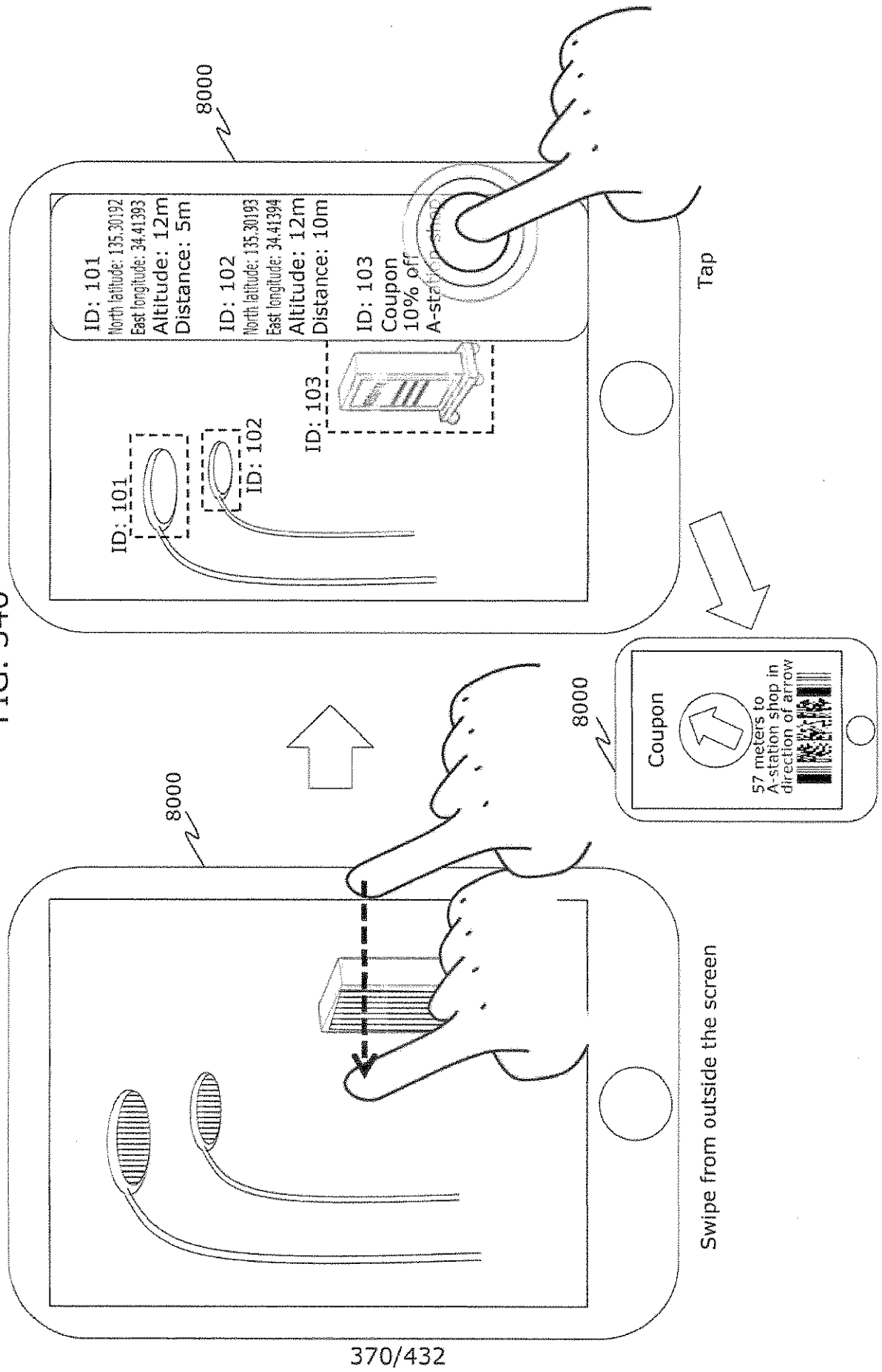


FIG. 347

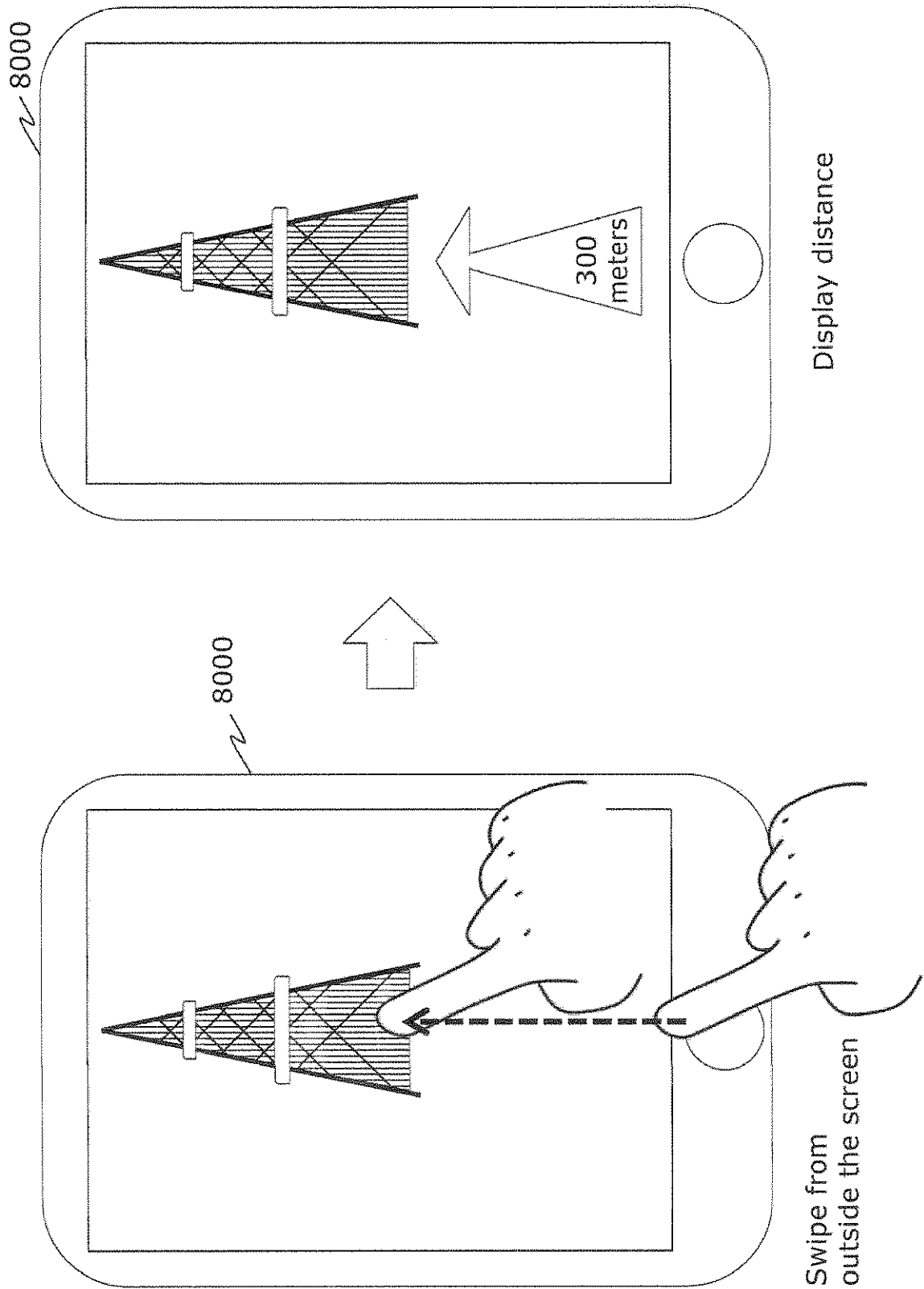


FIG. 348

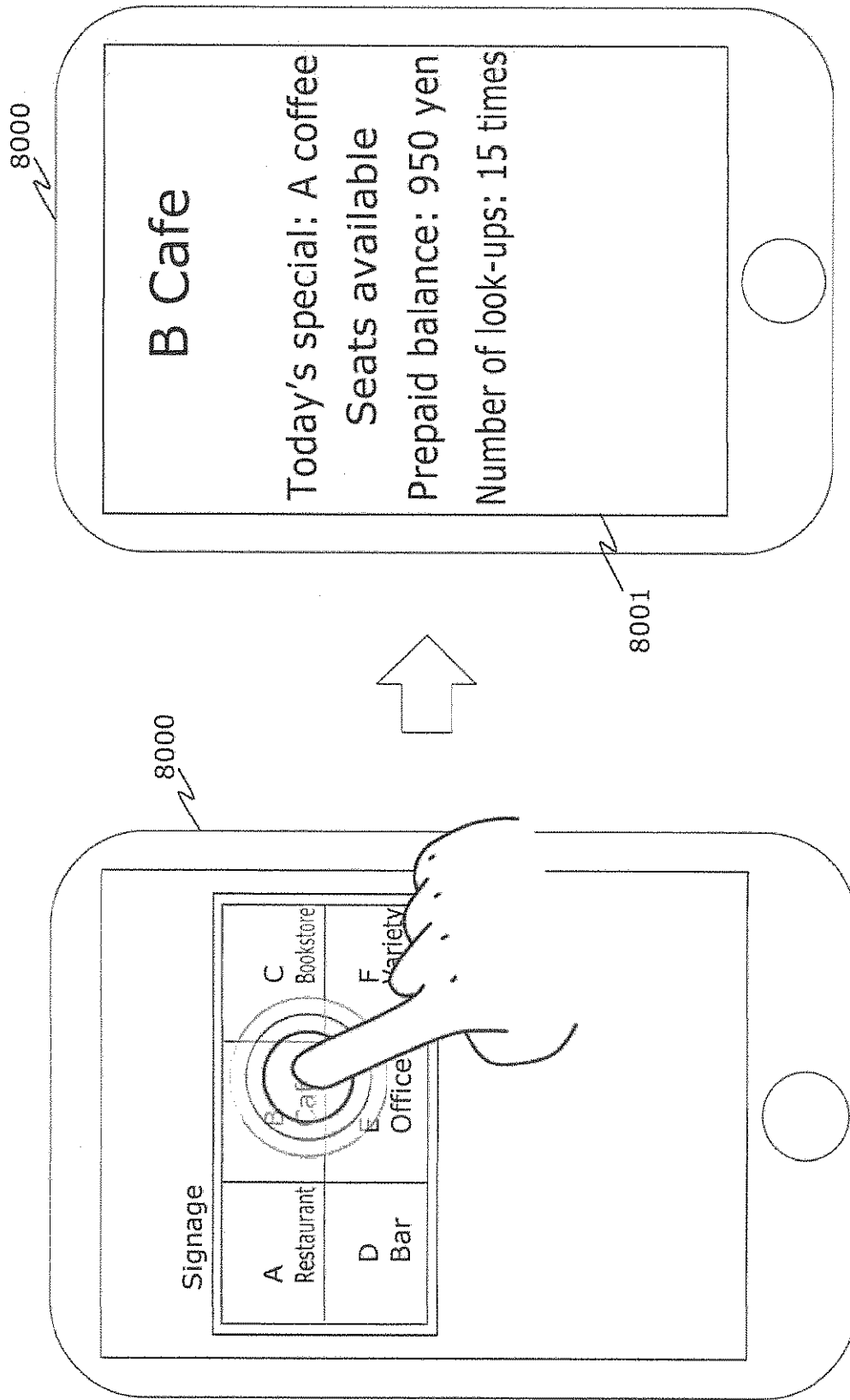


FIG. 349

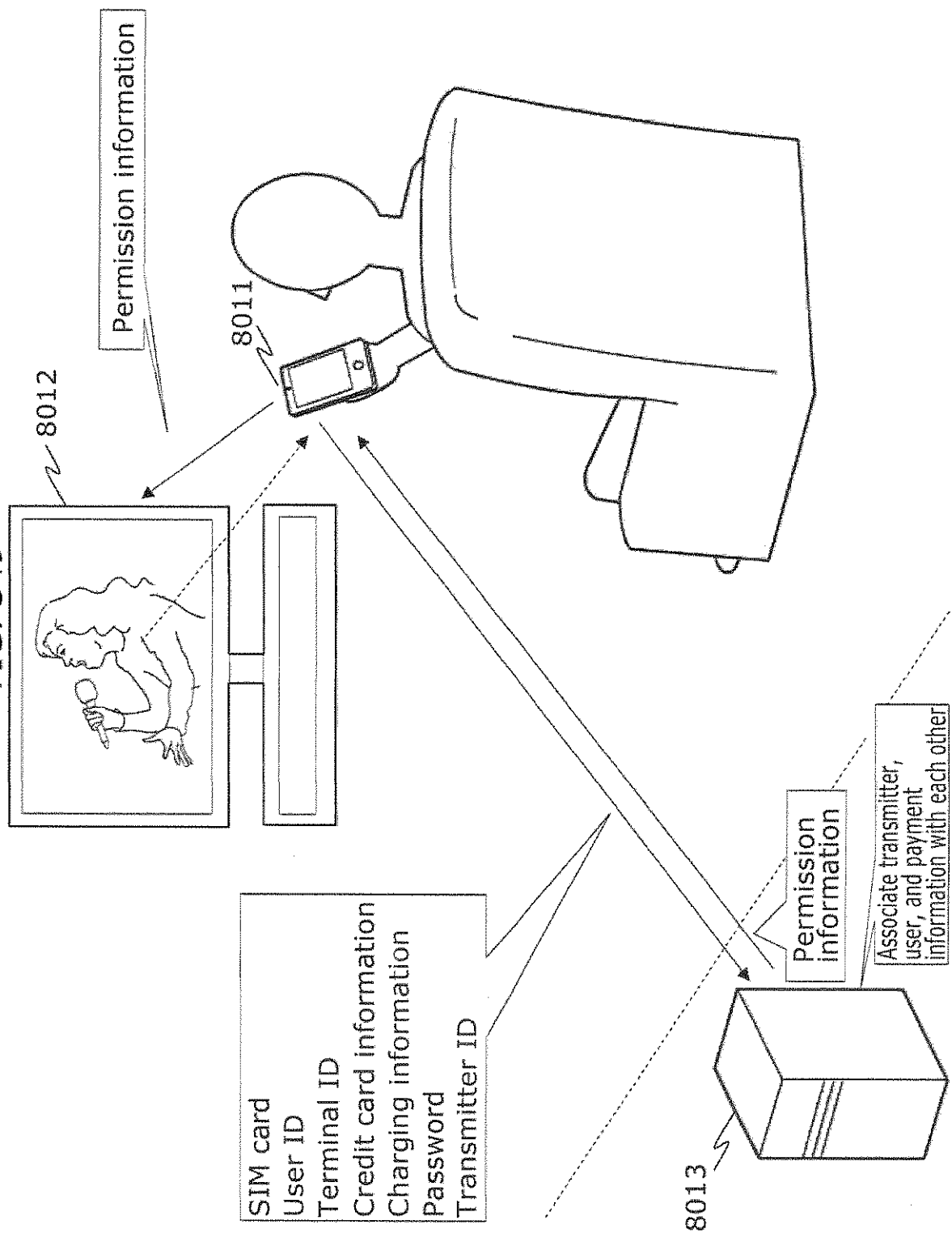


FIG. 350

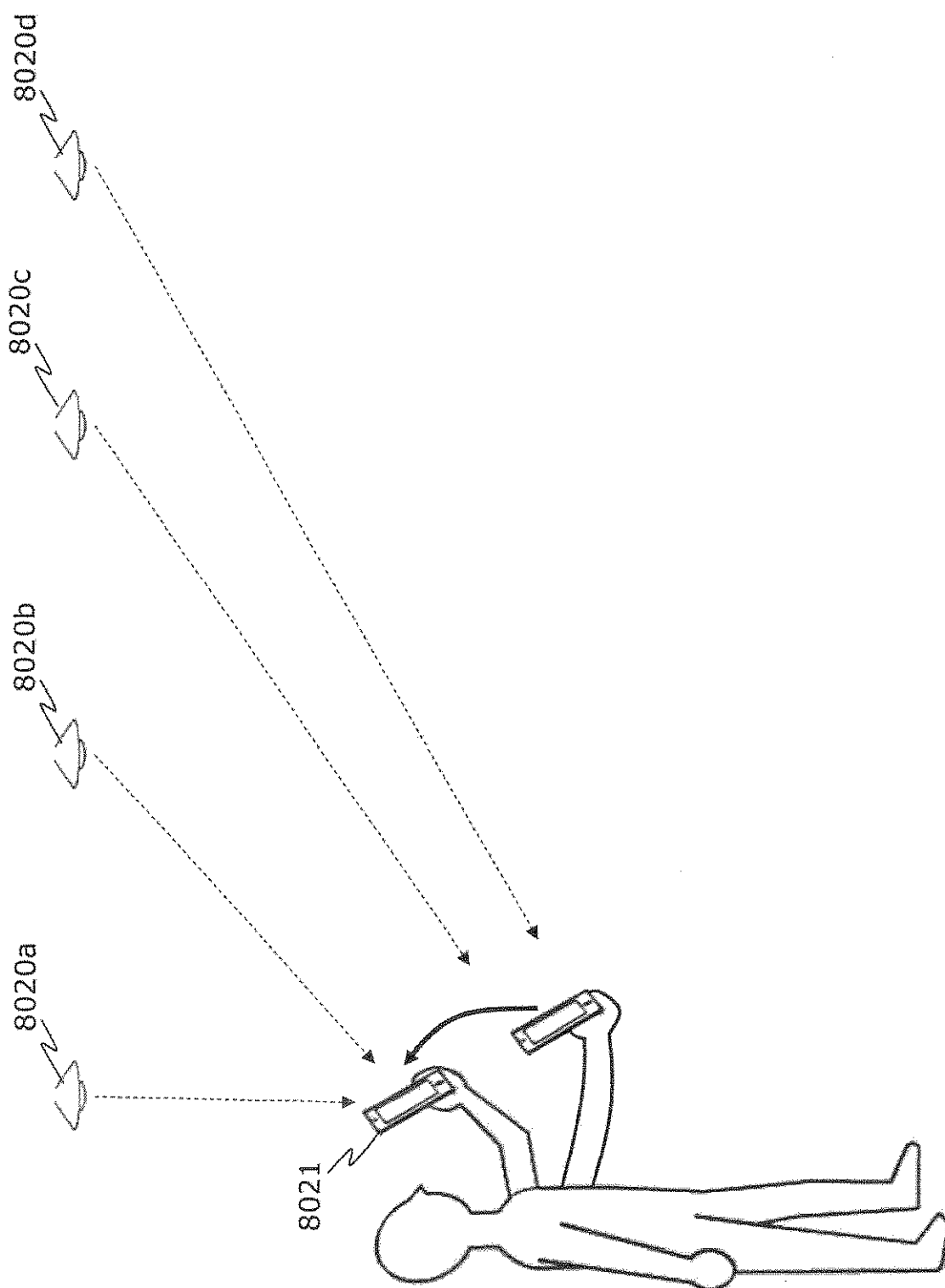


FIG. 351

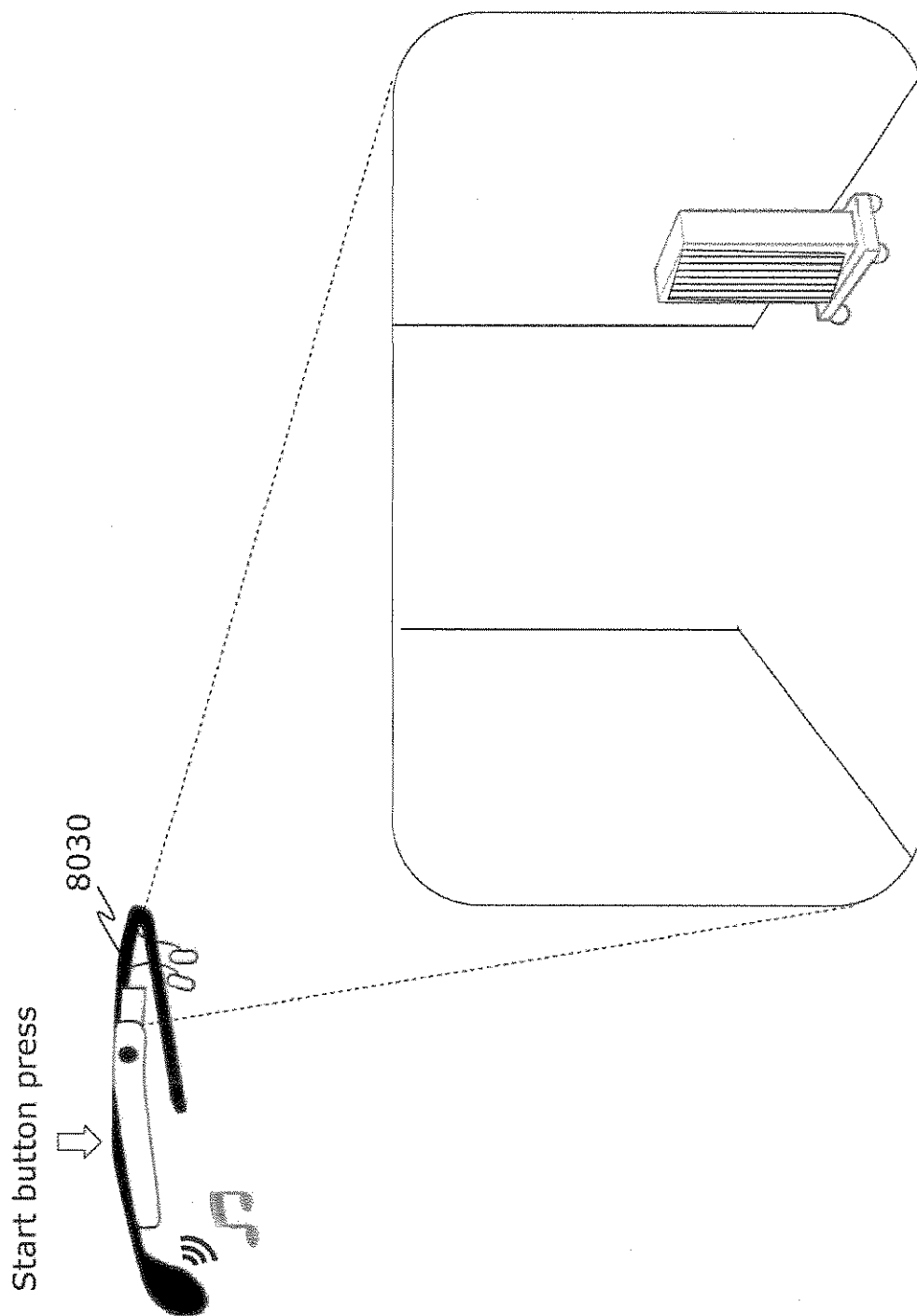
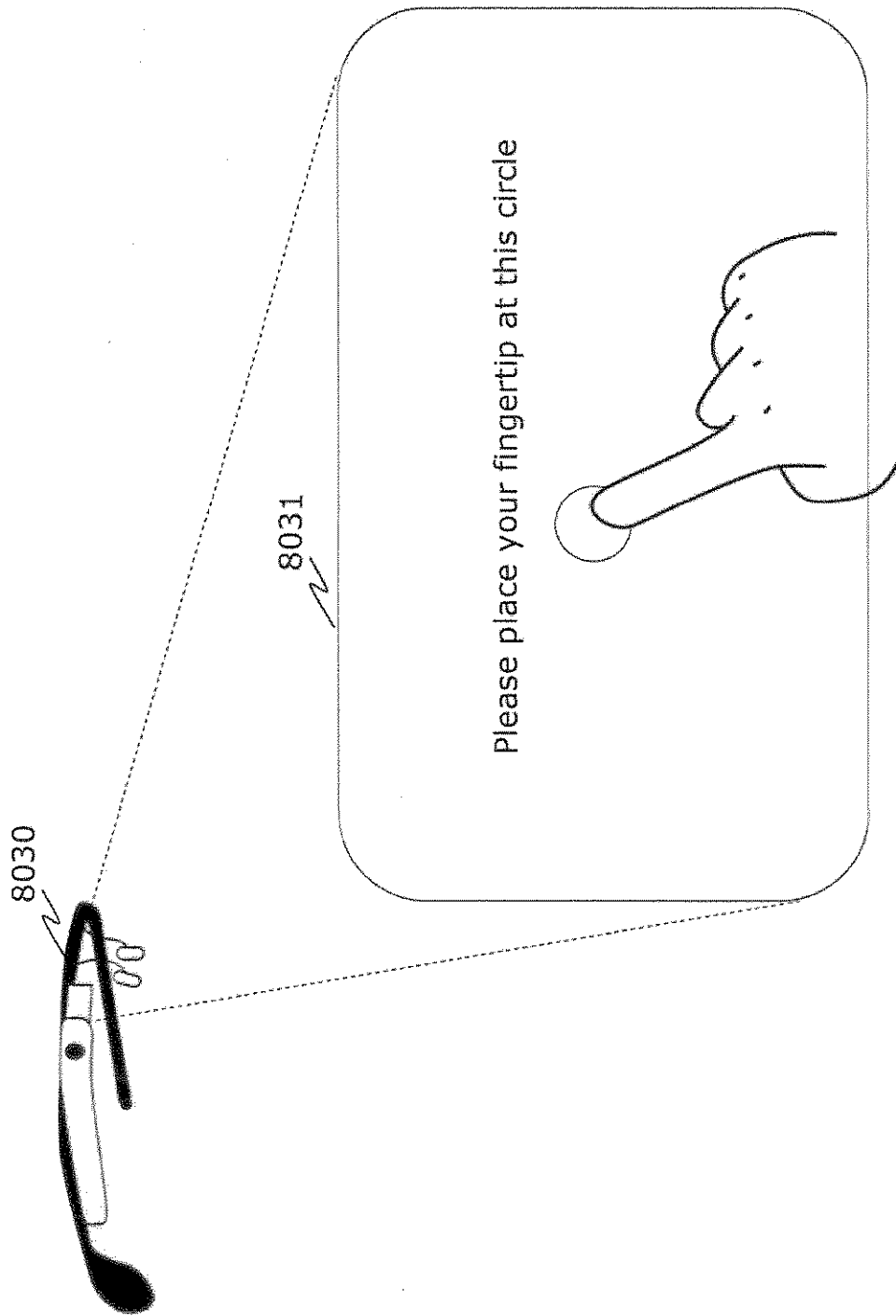


FIG. 352



Alignment of display position and imaging position

FIG. 353

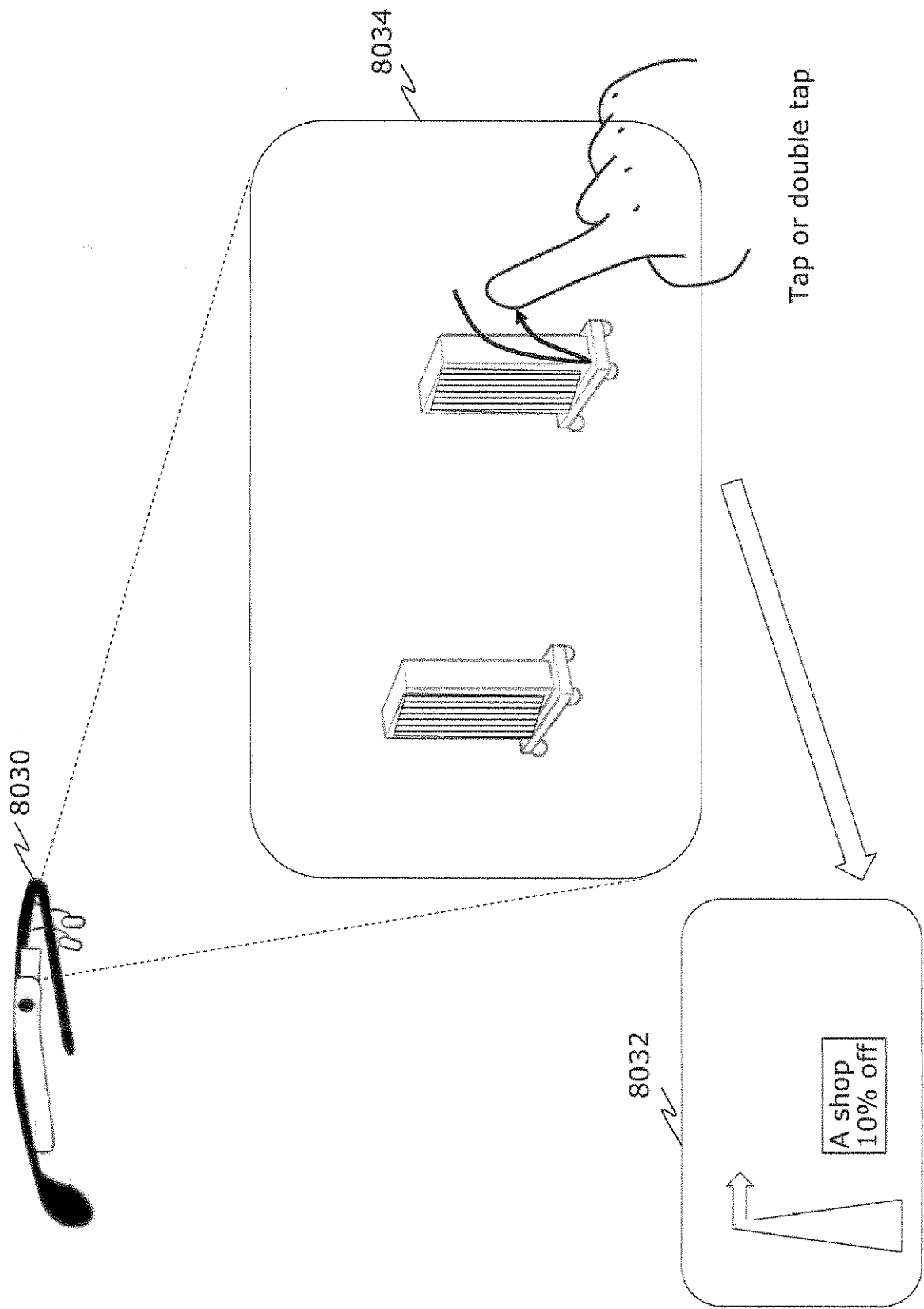


FIG. 354

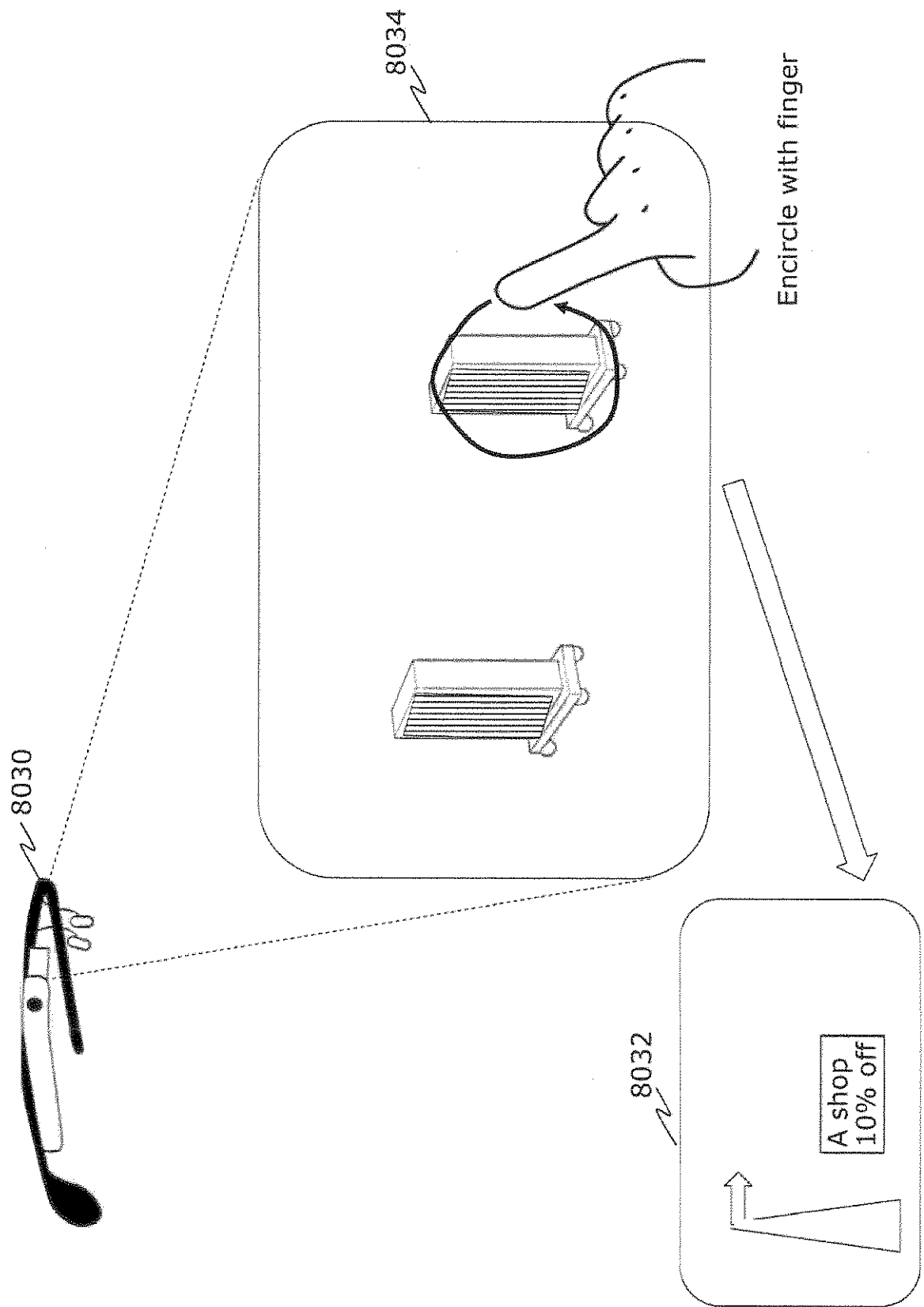


FIG. 355

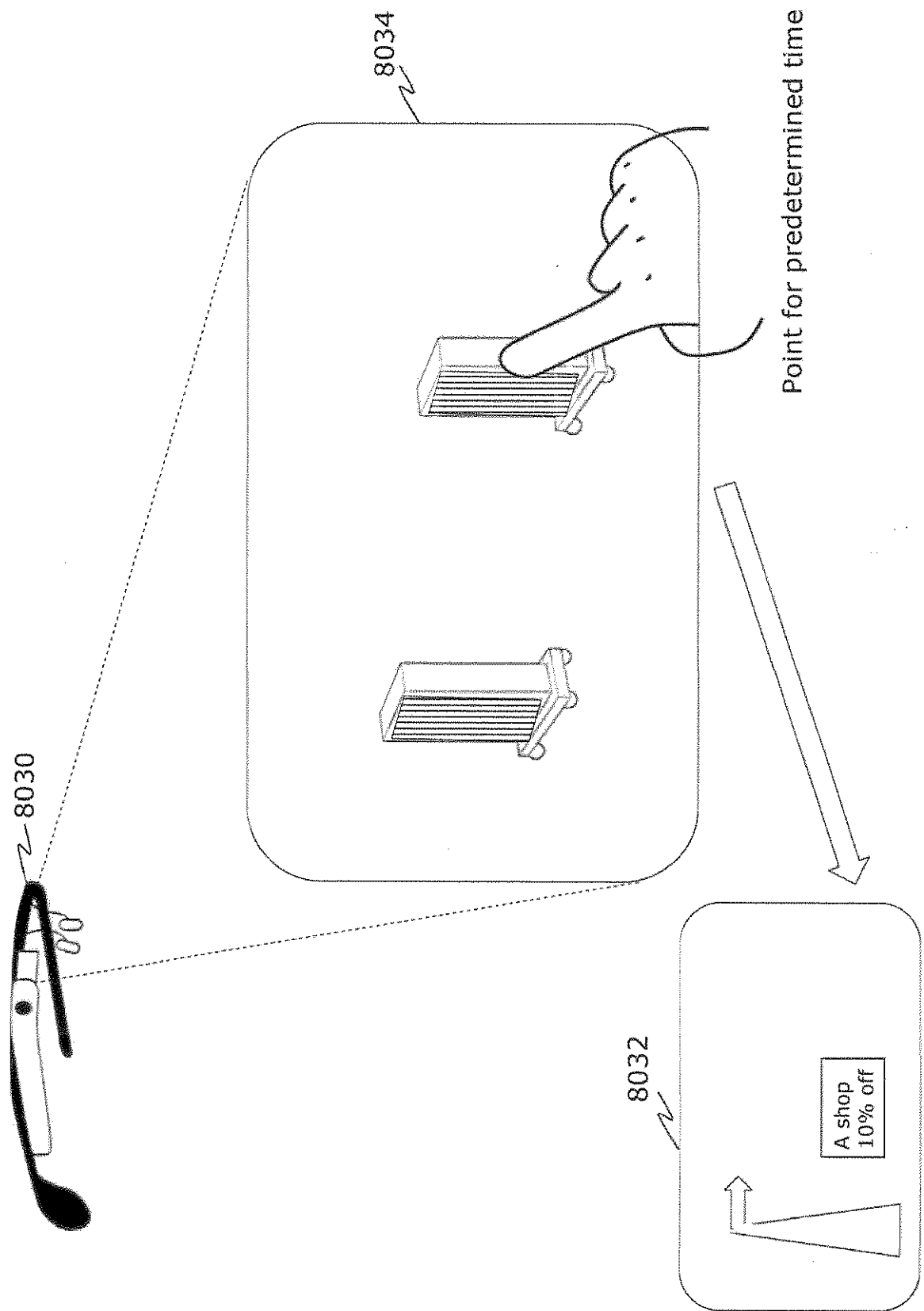


FIG. 356

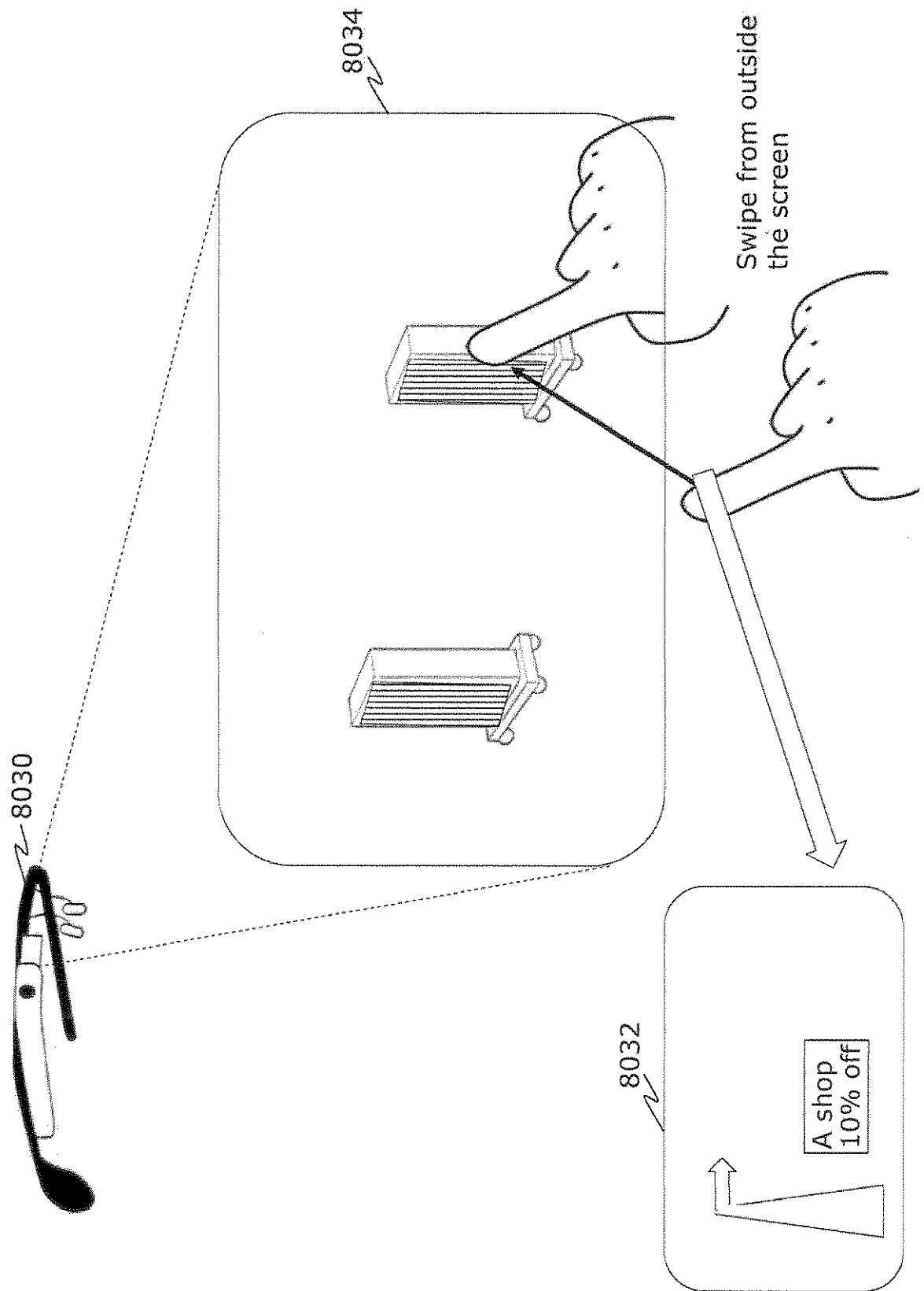


FIG. 357

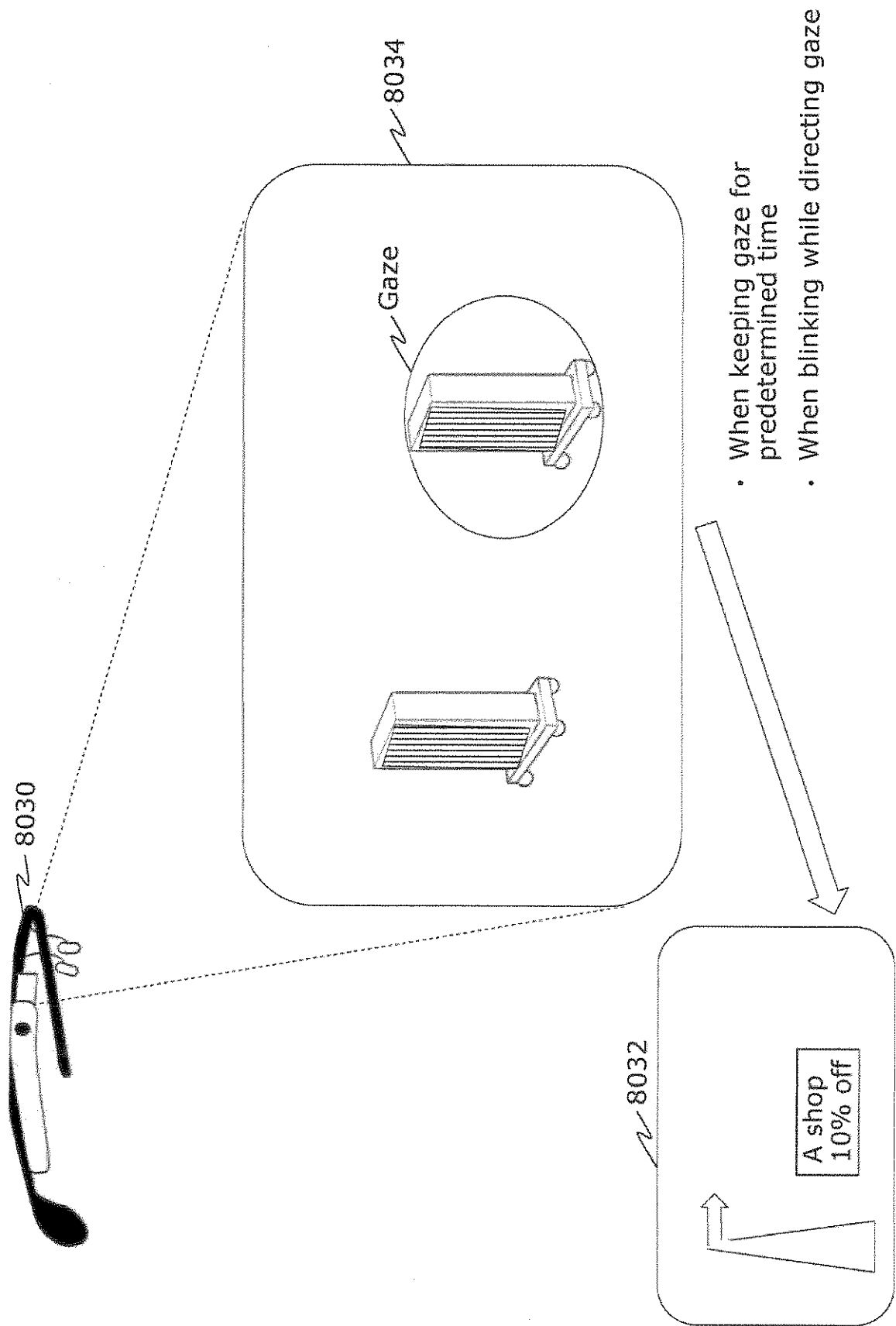


FIG. 358

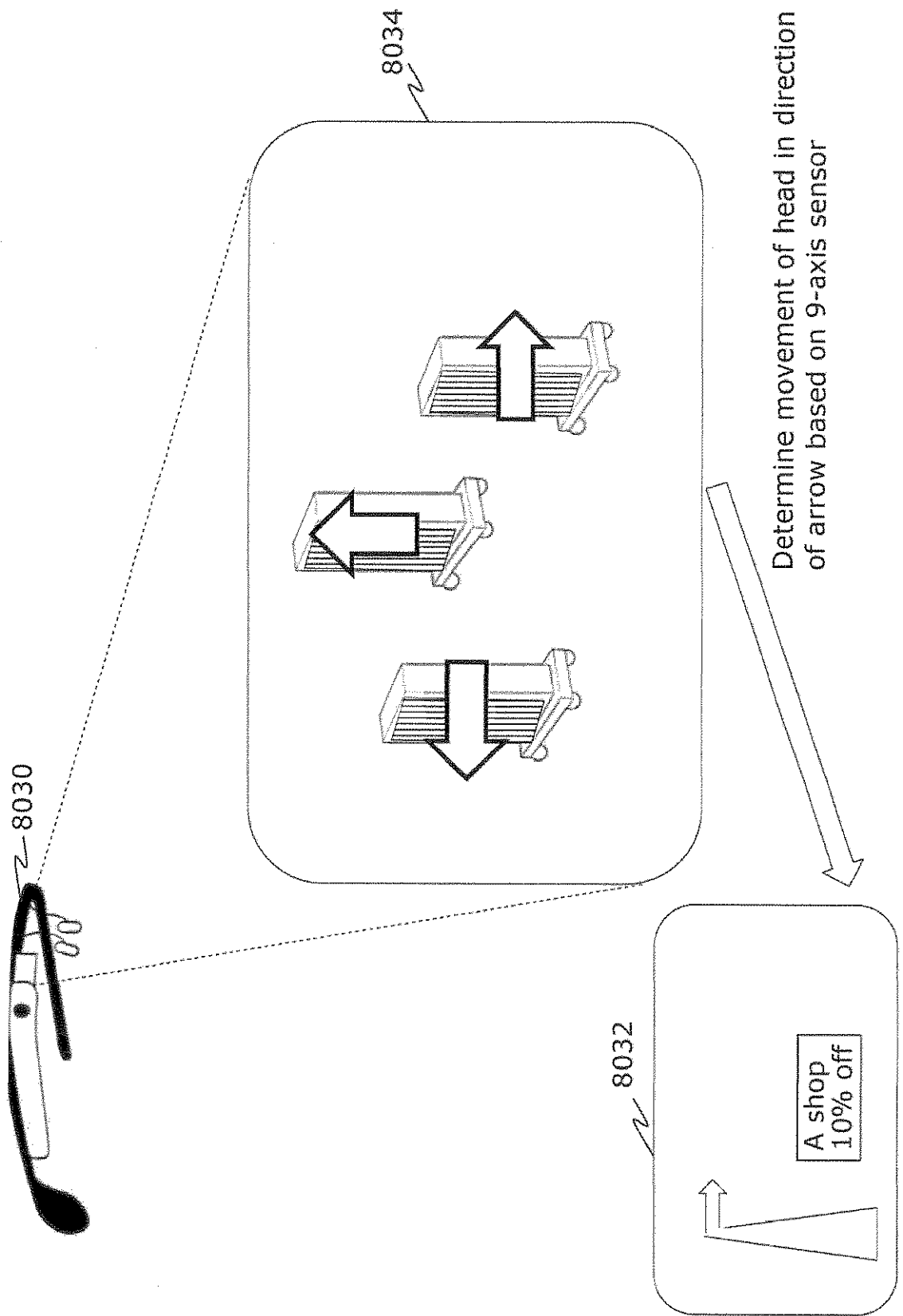


FIG. 359A

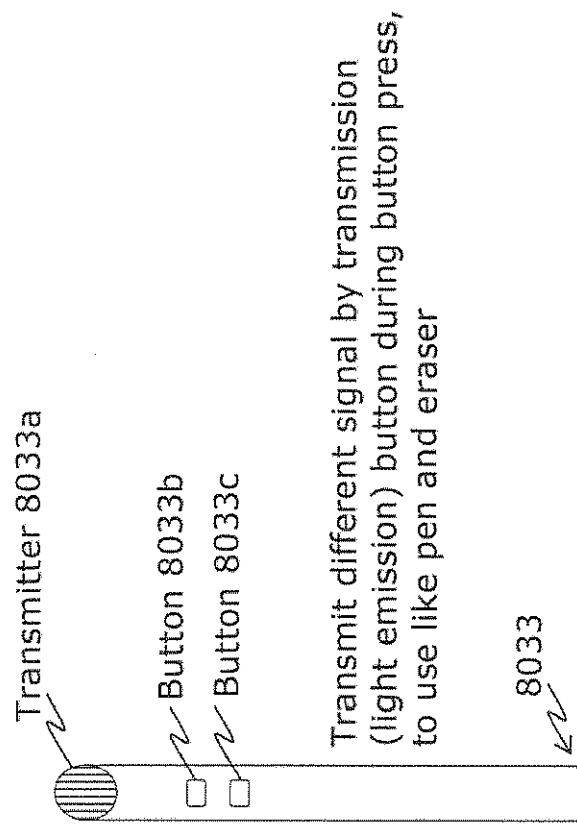


FIG. 359B

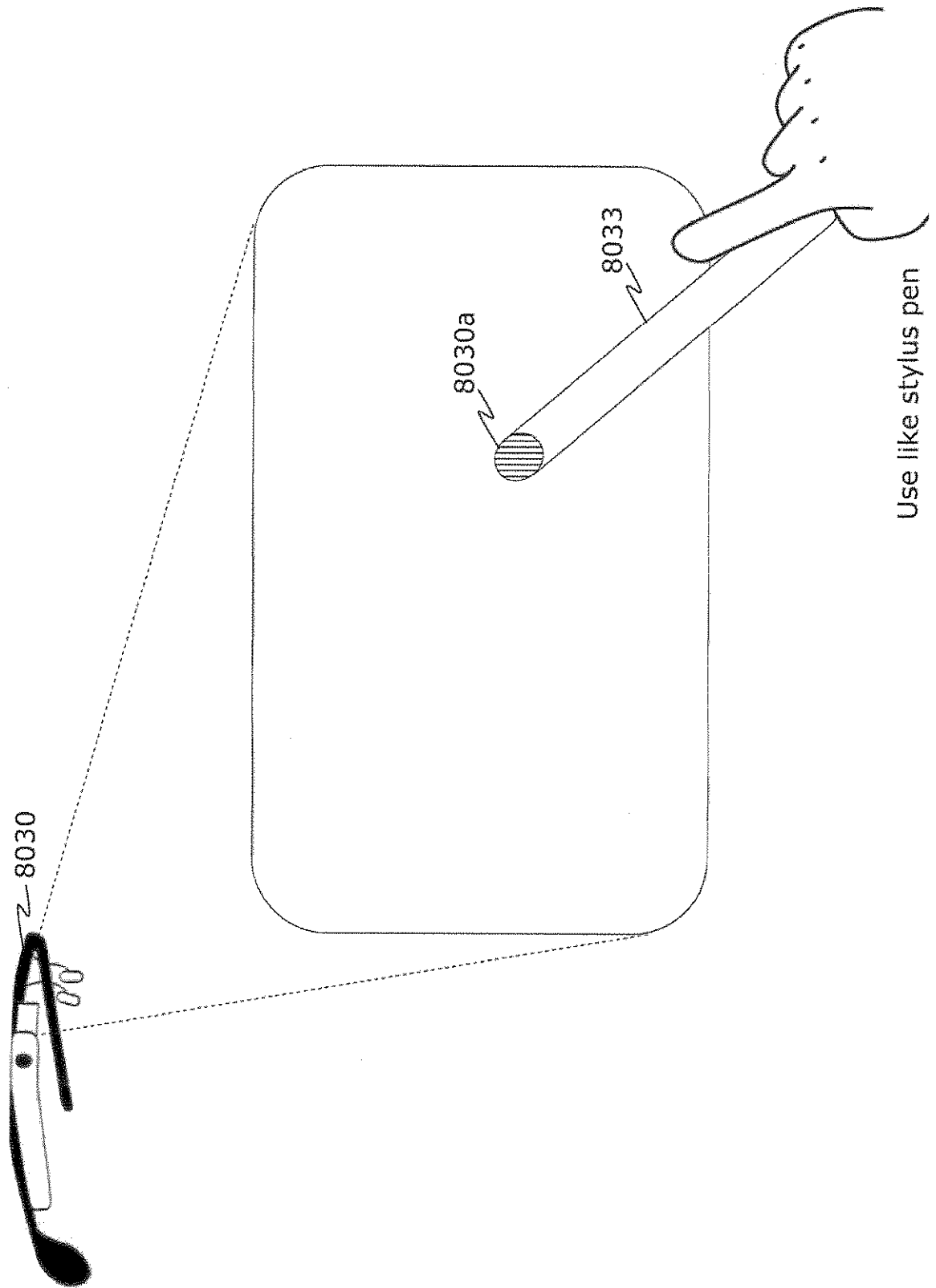


FIG. 360

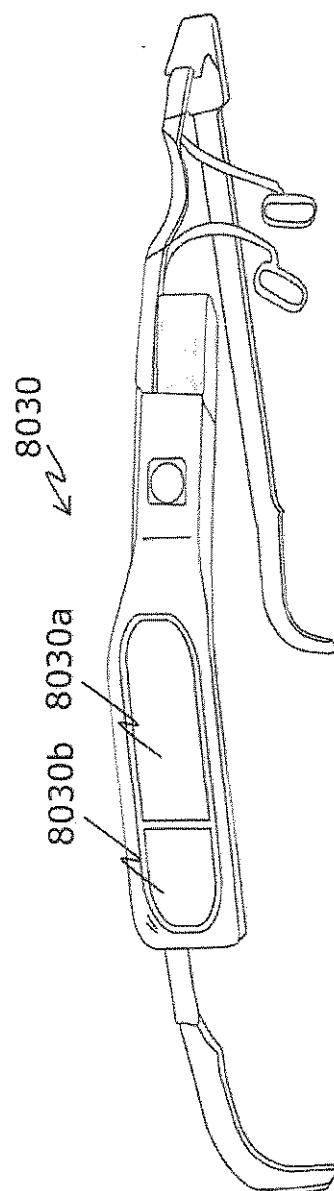


FIG. 361

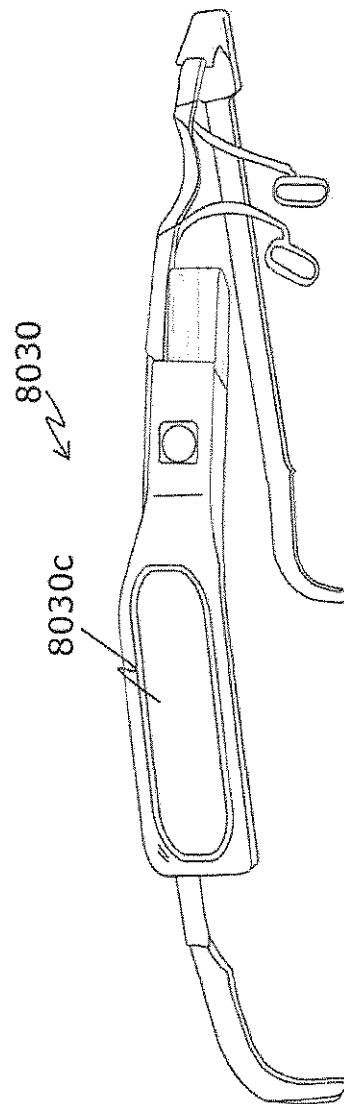


FIG. 362

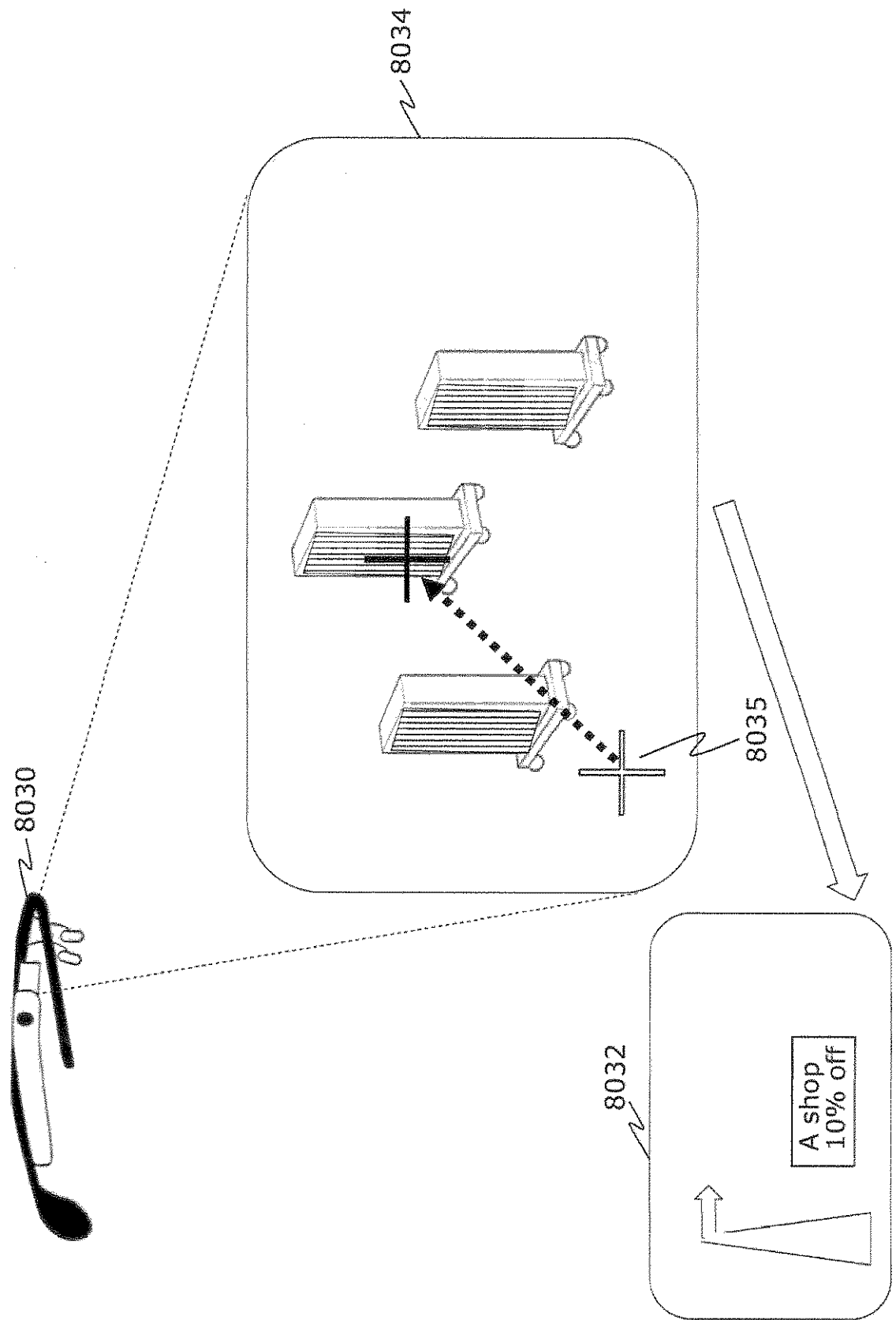


FIG. 363A

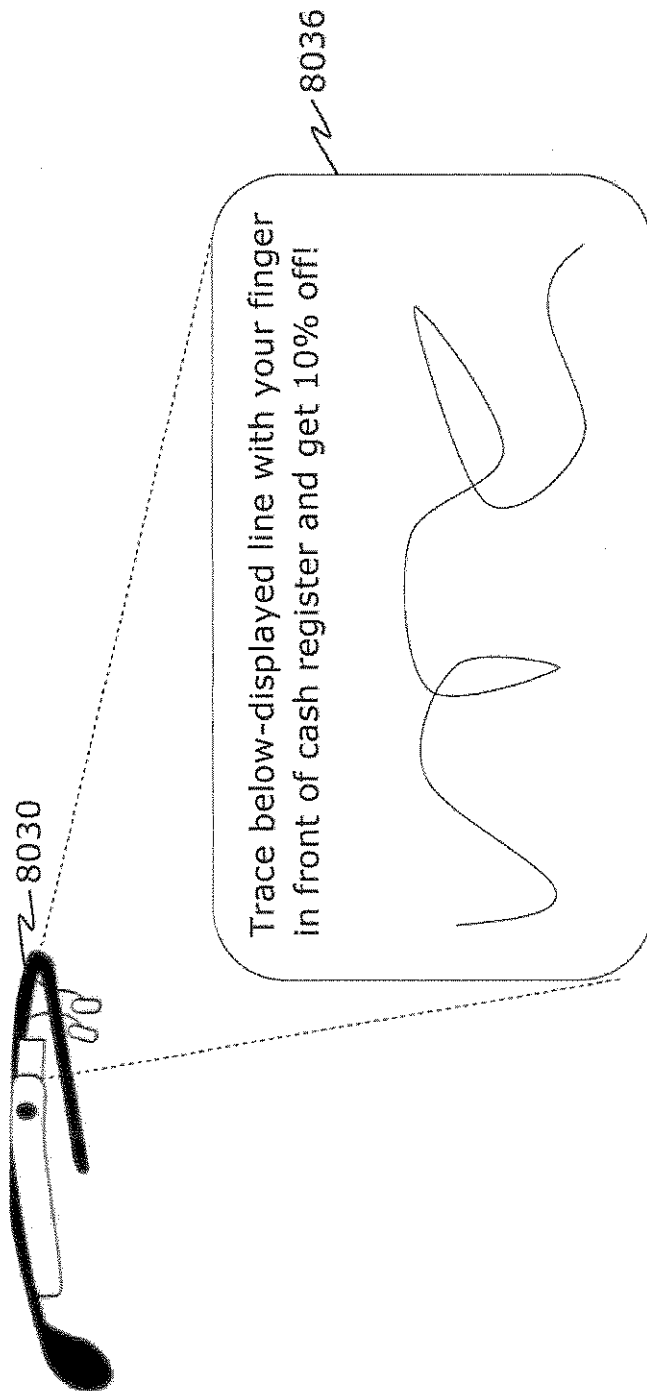


FIG. 363B

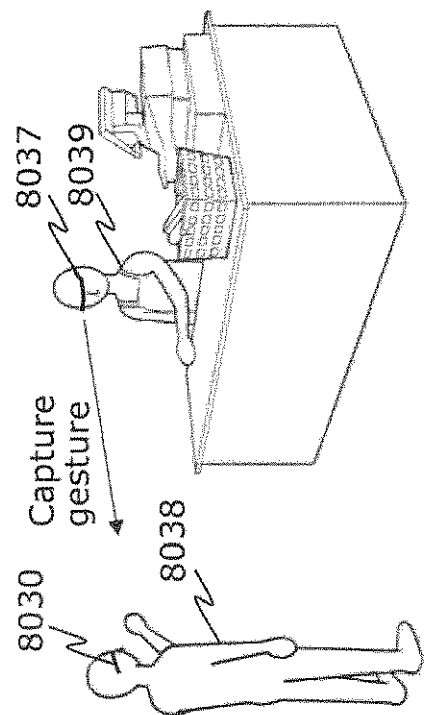


FIG. 364A

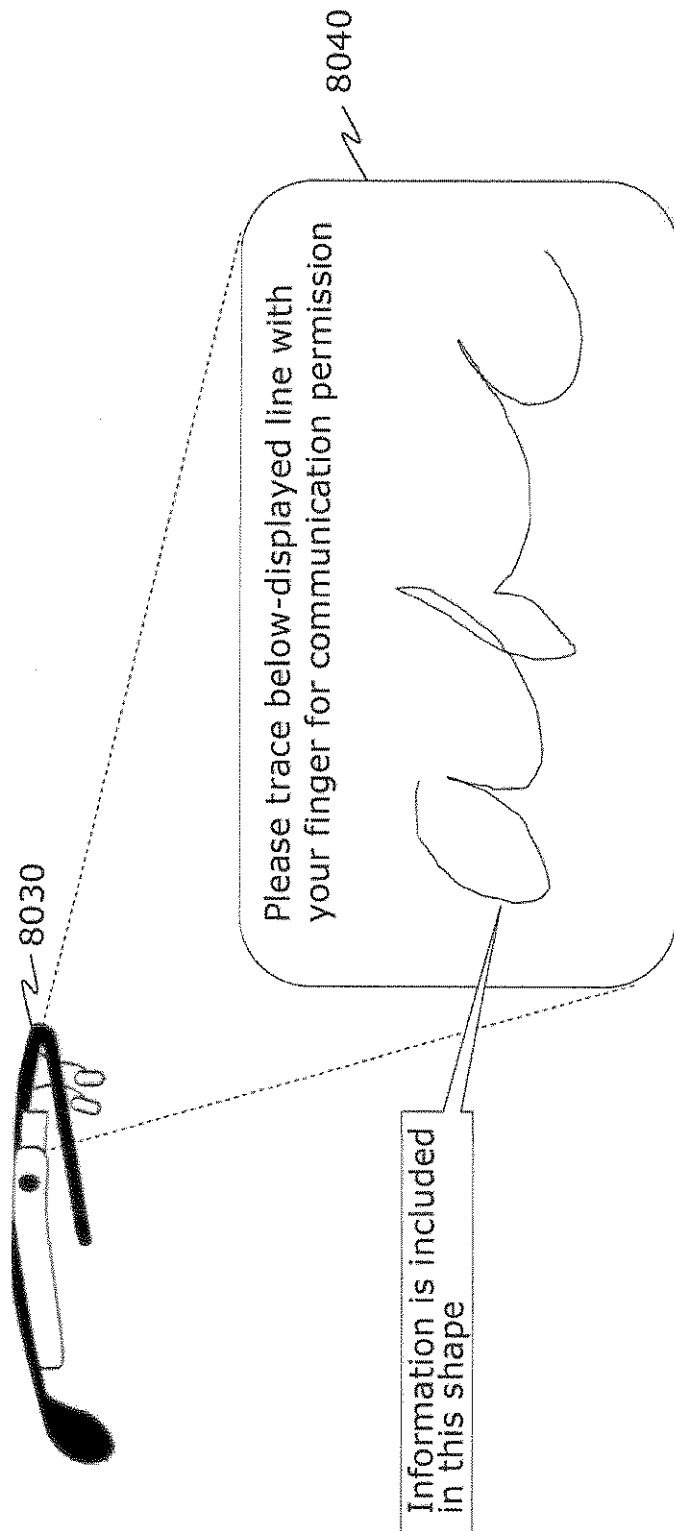


FIG. 364B

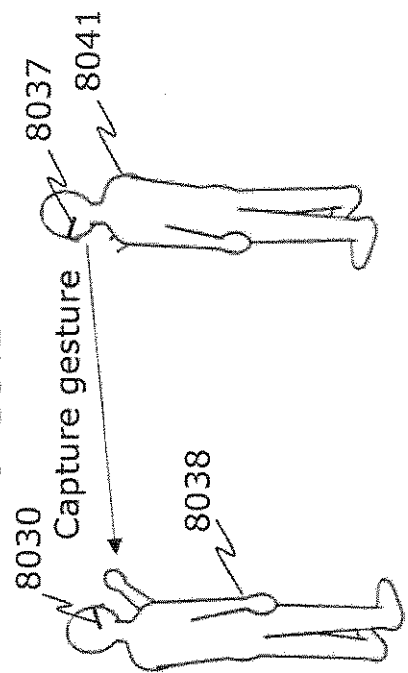
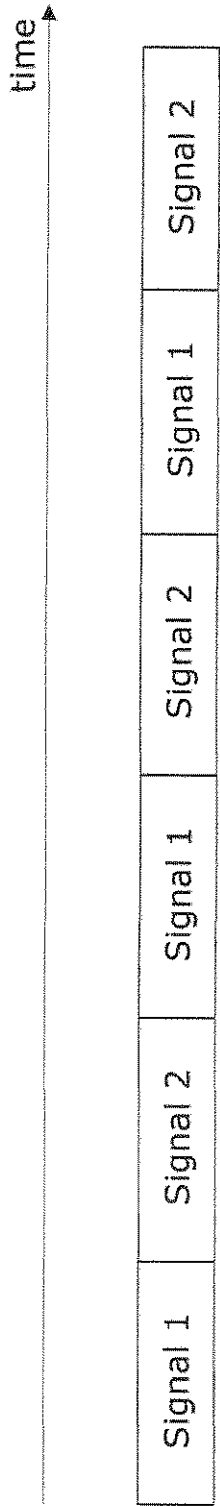


FIG. 365A



Alternately transmit signals of different types

FIG. 365B

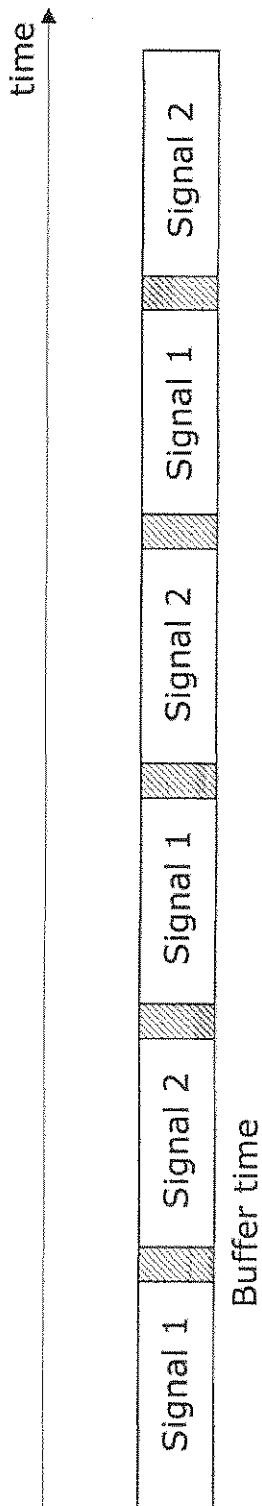


FIG. 366

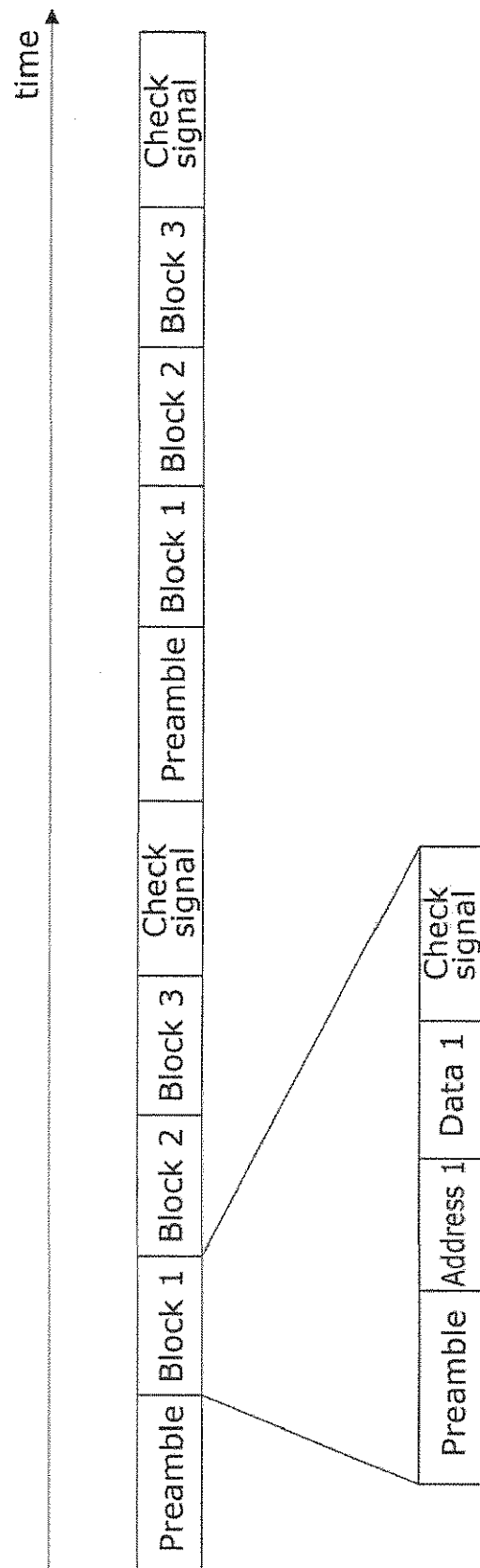


FIG. 367

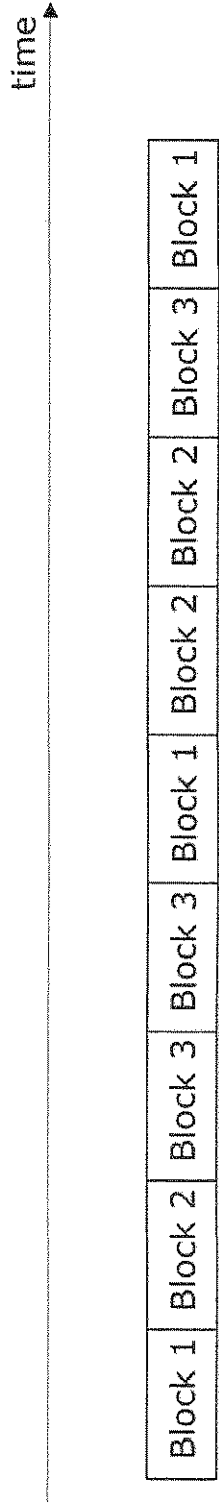
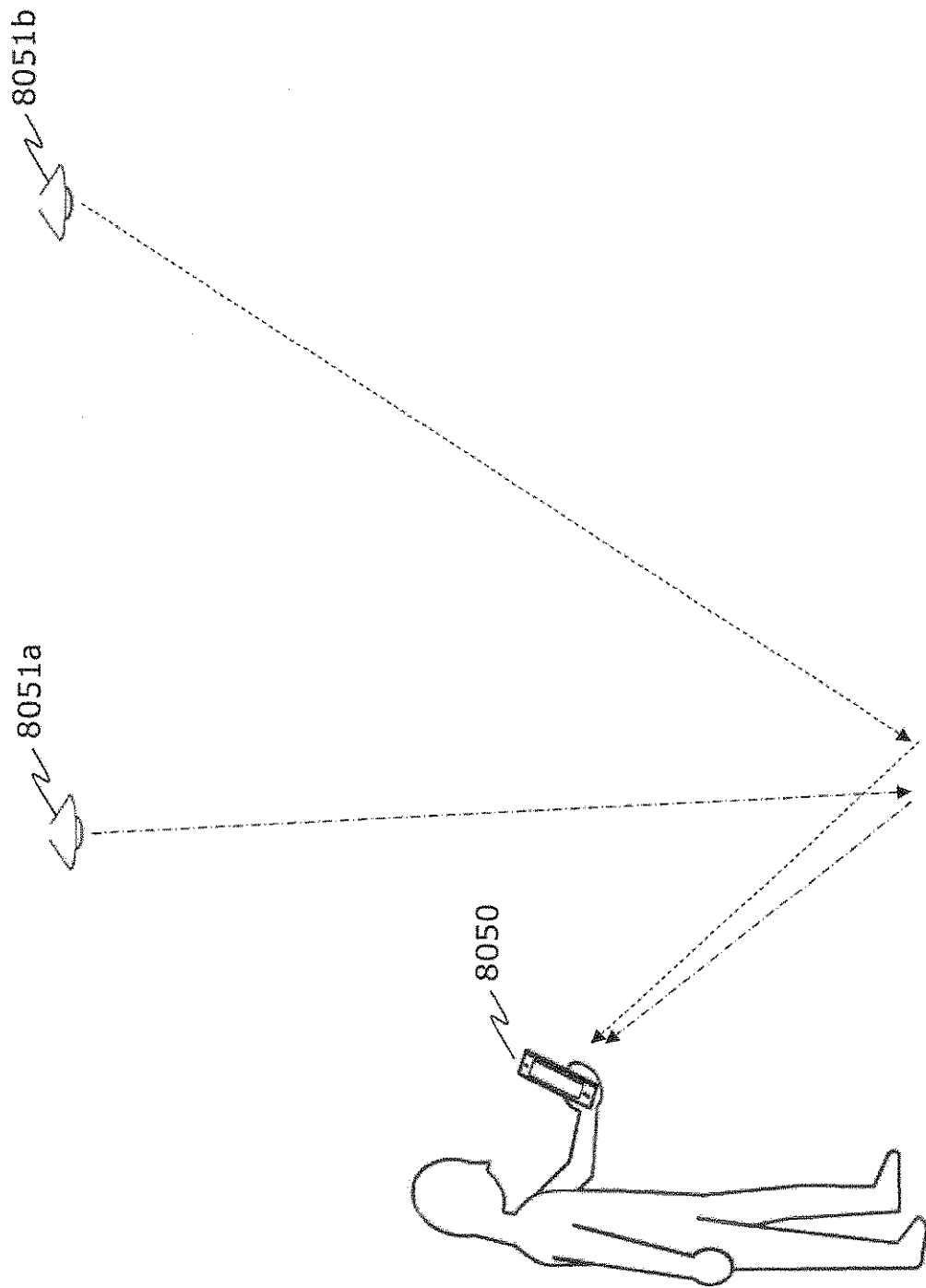
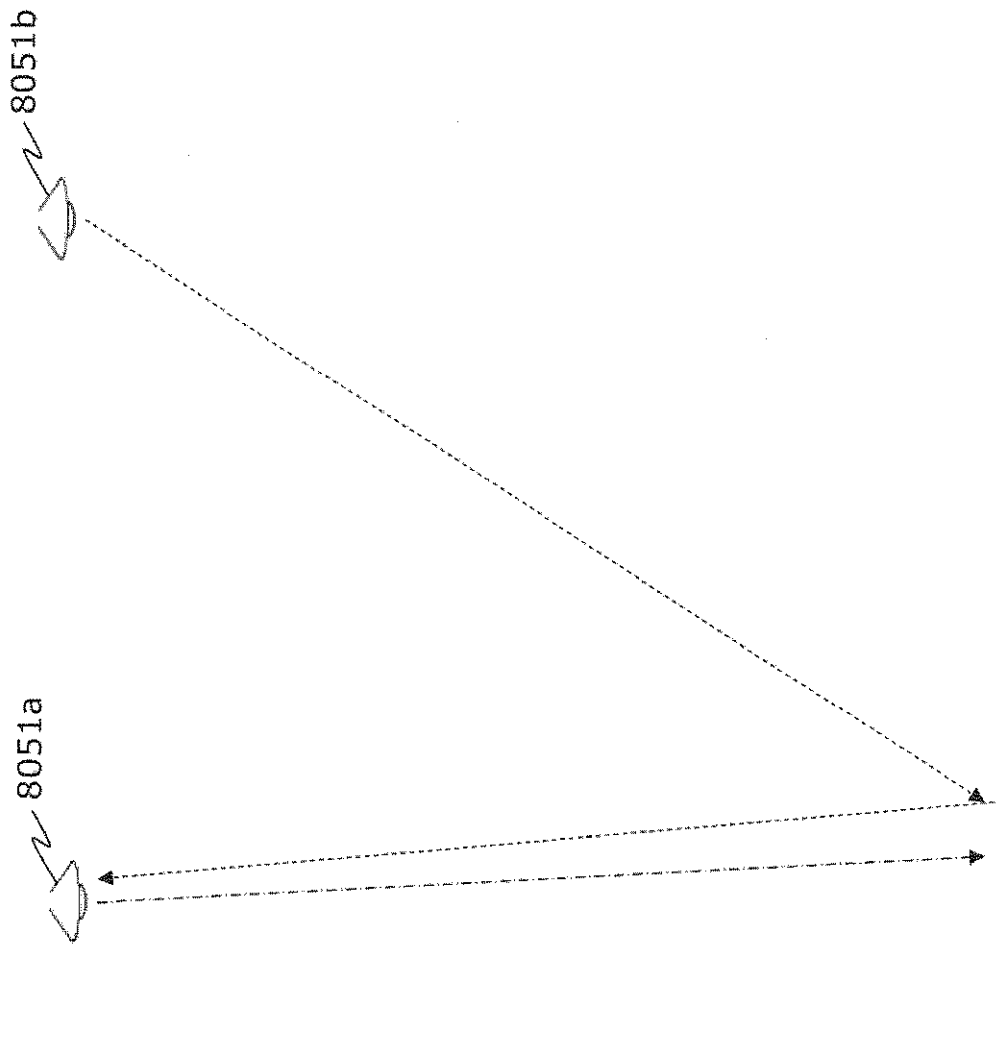


FIG. 368



Nearby positioned transmitters can be received without interference by transmitting signals of different frequencies or protocols

FIG. 369



Transmitter receives signal from other transmitter, and changes transmission protocol or transmits signal in period during which other transmitter is not transmitting signal, to prevent its transmission signal from interfering with transmission signal from other transmitter

FIG. 370

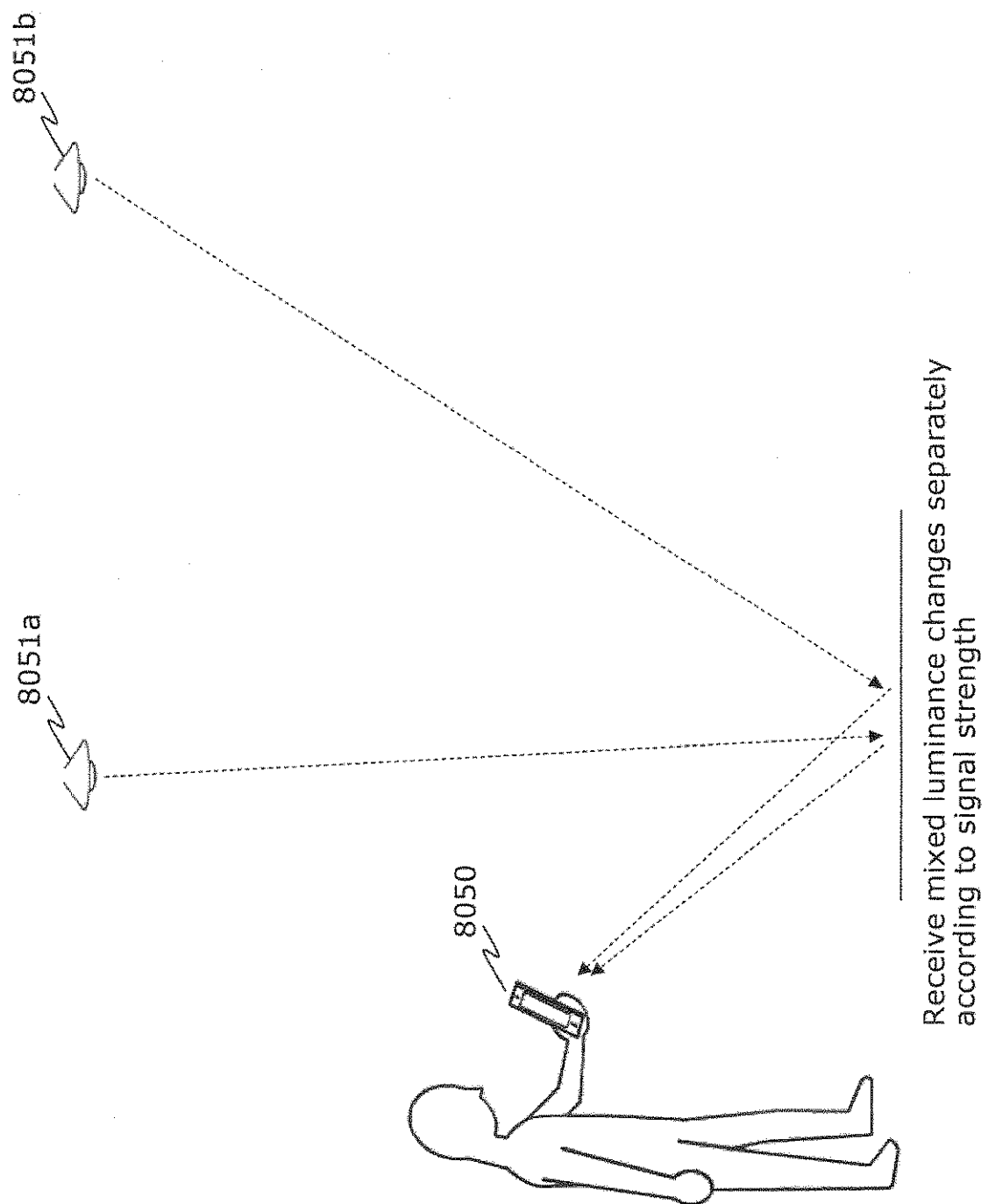
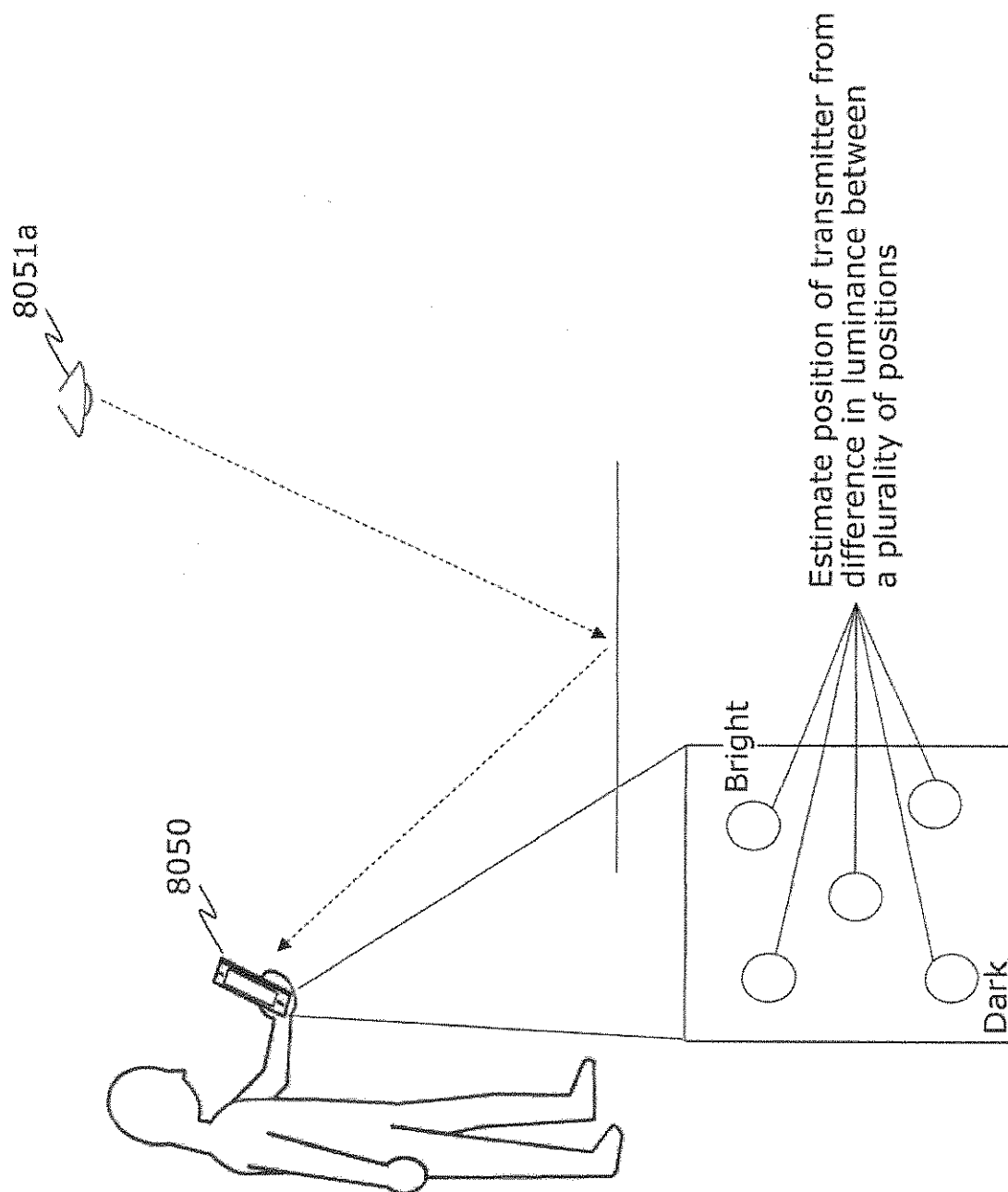


FIG. 371



The diagram illustrates a system for gaze estimation. A light source (7510b) emits light (7510a) which is received by a back camera (7510c) on a mobile device. The mobile device also receives 6-axis estimation information from a light source (7510d). The system estimates gaze by the front camera (7510g) and provides 6-axis estimation information (7510h) to a display (7510e). The diagram shows a top-down view of a person's head and shoulders, with the mobile device positioned in front of them. The light source (7510b) is positioned to the left, and the display (7510e) is positioned to the right. The mobile device is shown with a front camera (7510g) and a back camera (7510c). The 6-axis estimation information (7510d) is shown as a dashed line with an arrow pointing to the mobile device. The gaze estimation (7510g) is shown as a dashed line with an arrow pointing to the front camera. The 6-axis estimation information (7510h) is shown as a dashed line with an arrow pointing to the display. The light source (7510a) is shown as a dashed line with an arrow pointing to the back camera. The light source (7510b) is shown as a dashed line with an arrow pointing to the back camera. The light source (7510d) is shown as a dashed line with an arrow pointing to the mobile device. The light source (7510e) is shown as a dashed line with an arrow pointing to the display. The light source (7510f) is shown as a dashed line with an arrow pointing to the mobile device.

FIG. 373

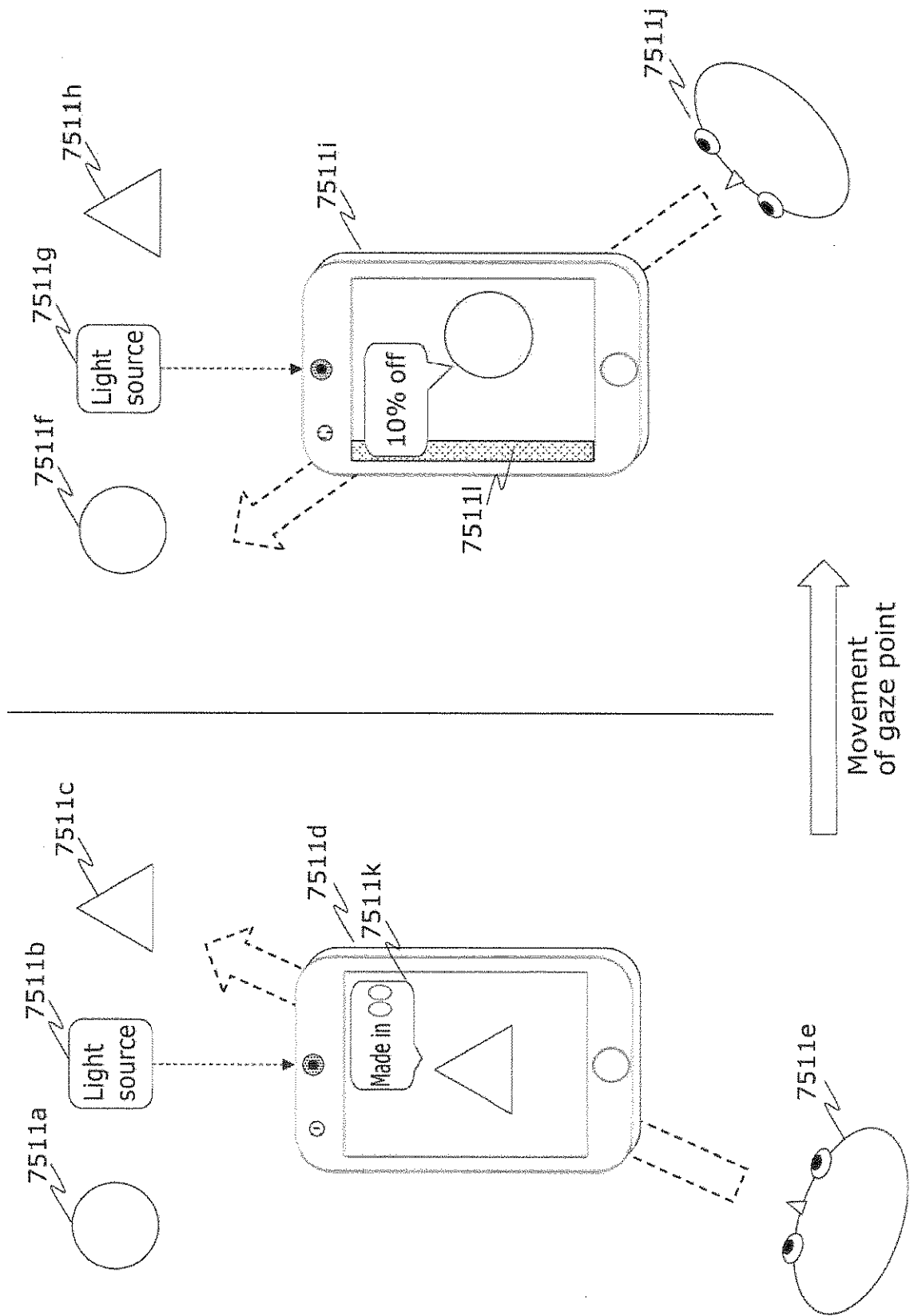


FIG. 374

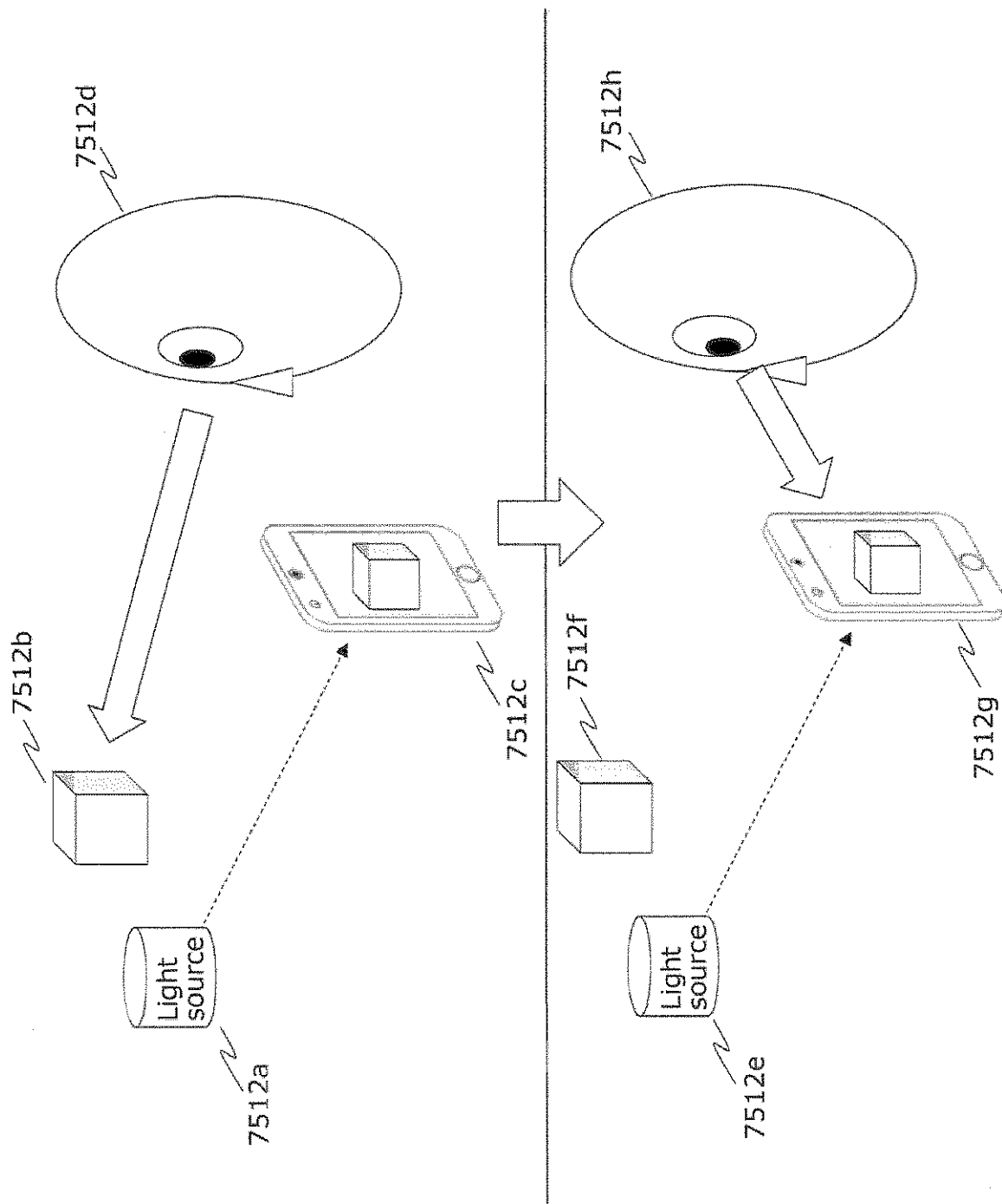


FIG. 375

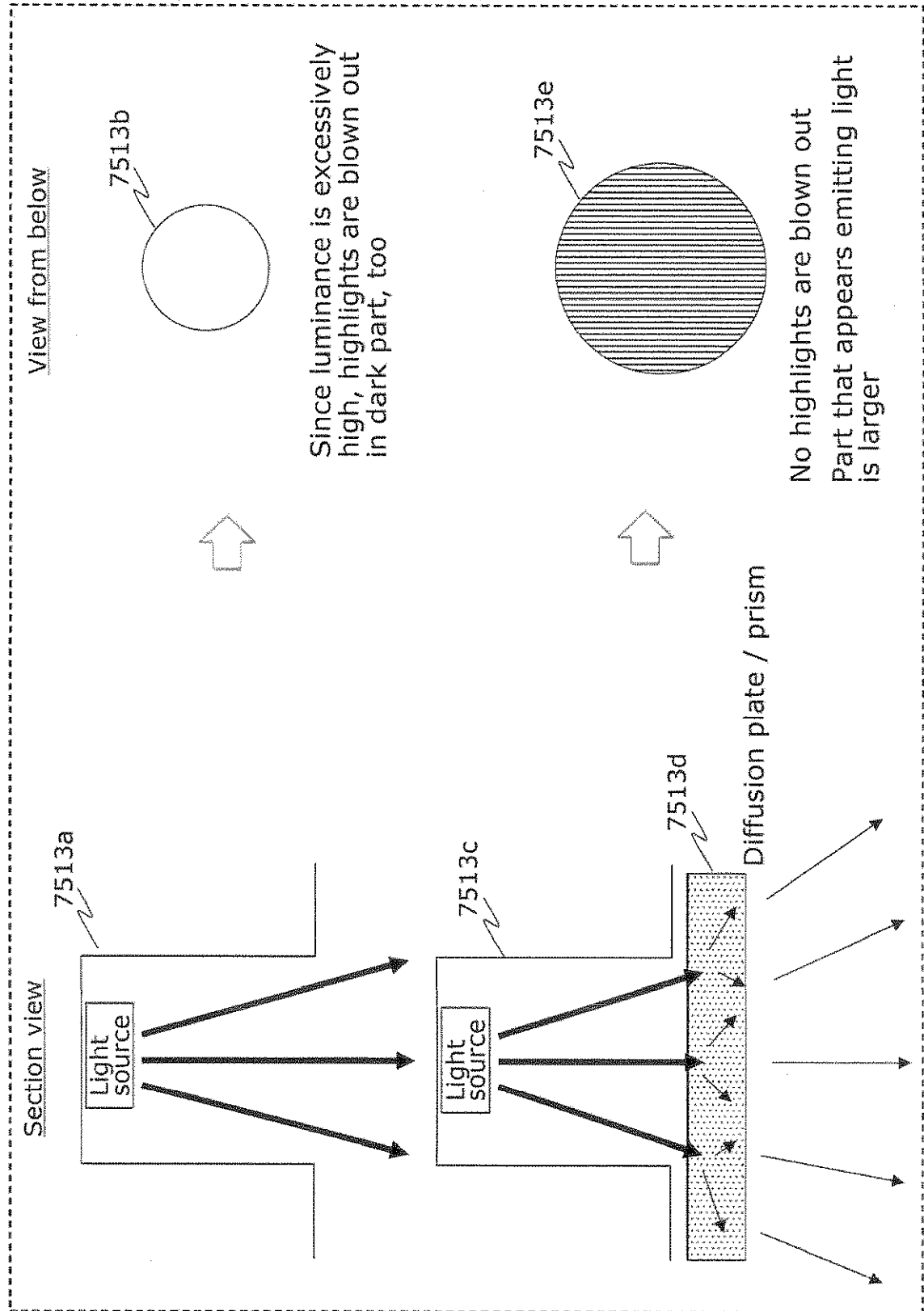


FIG. 376

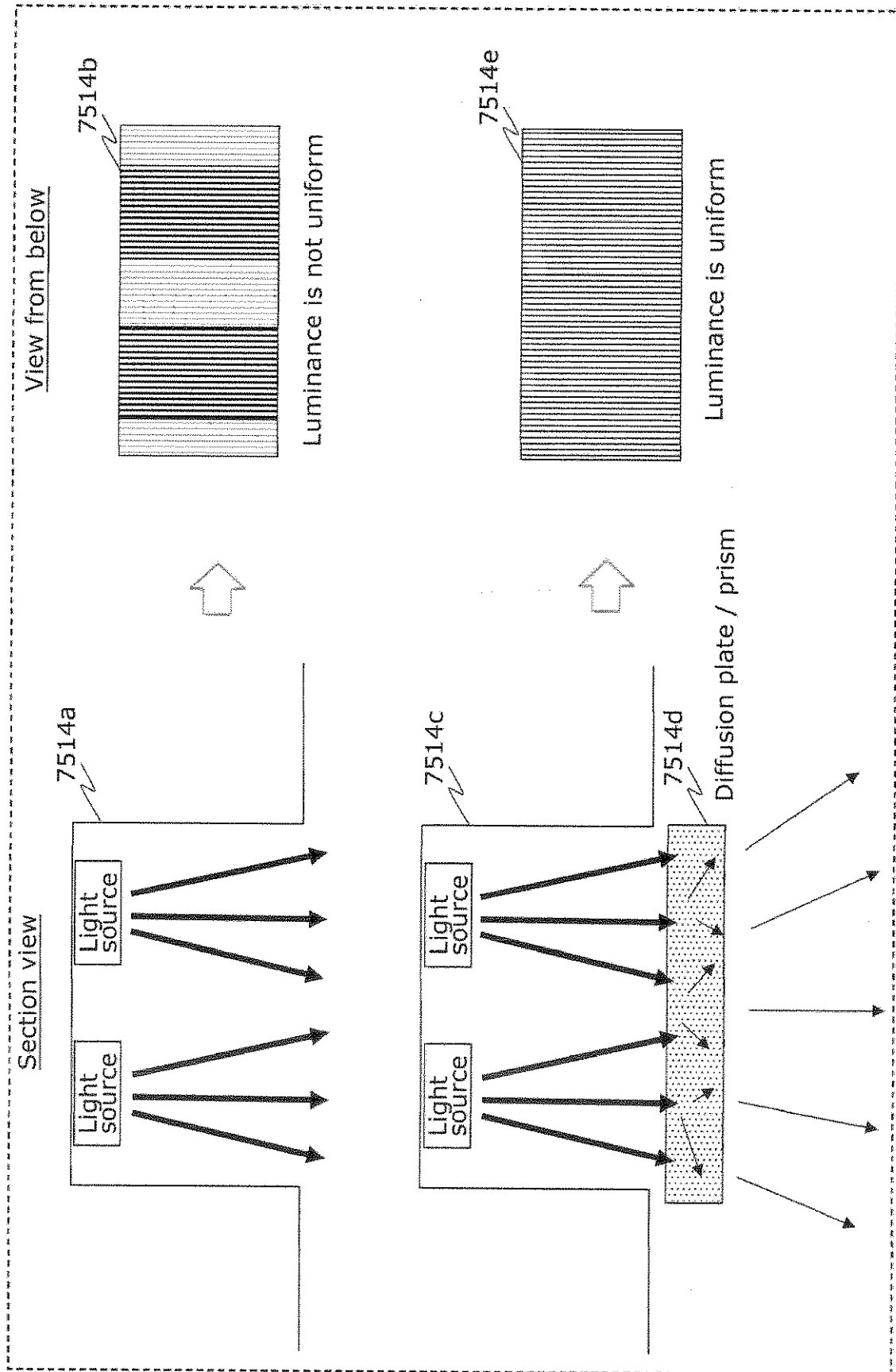


FIG. 377

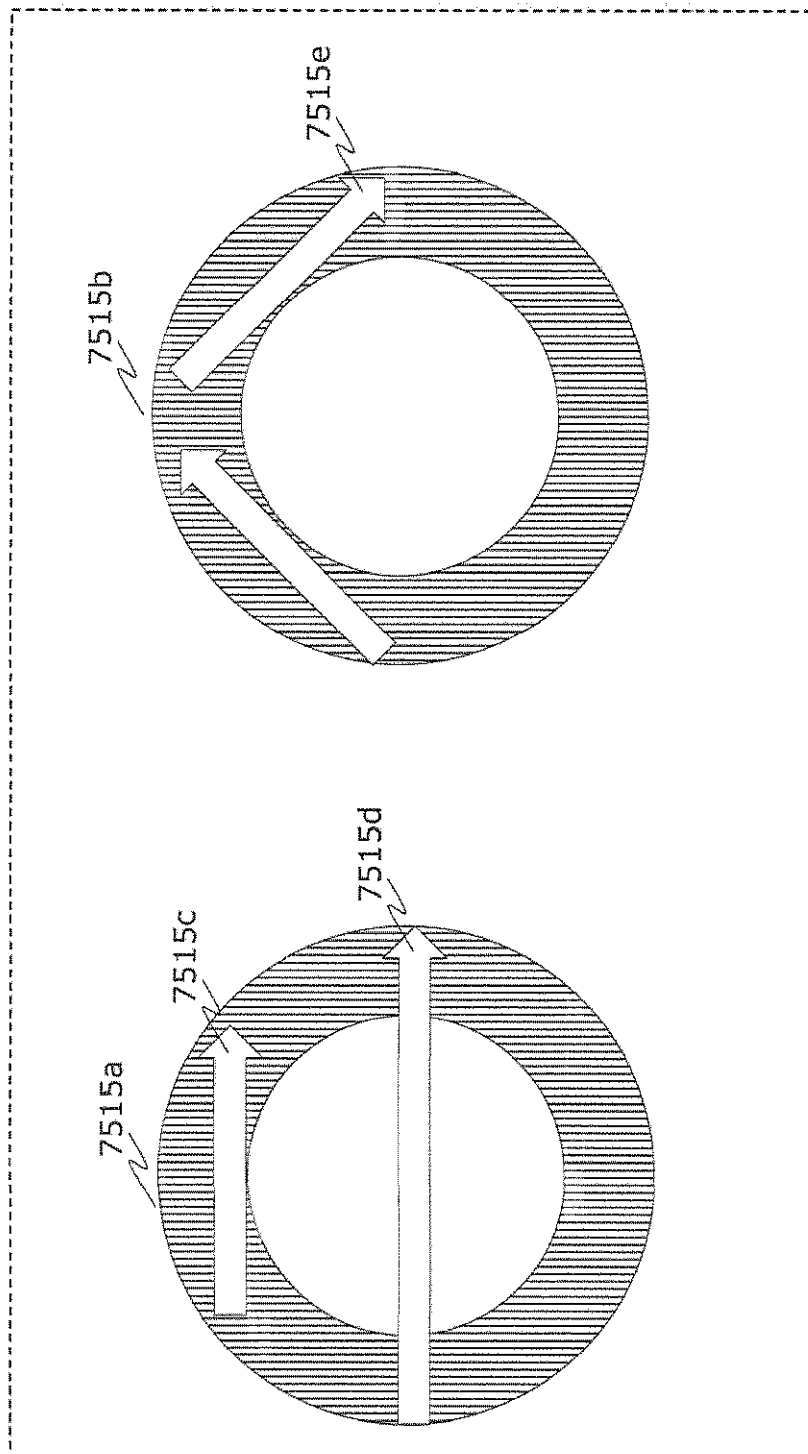


FIG. 378

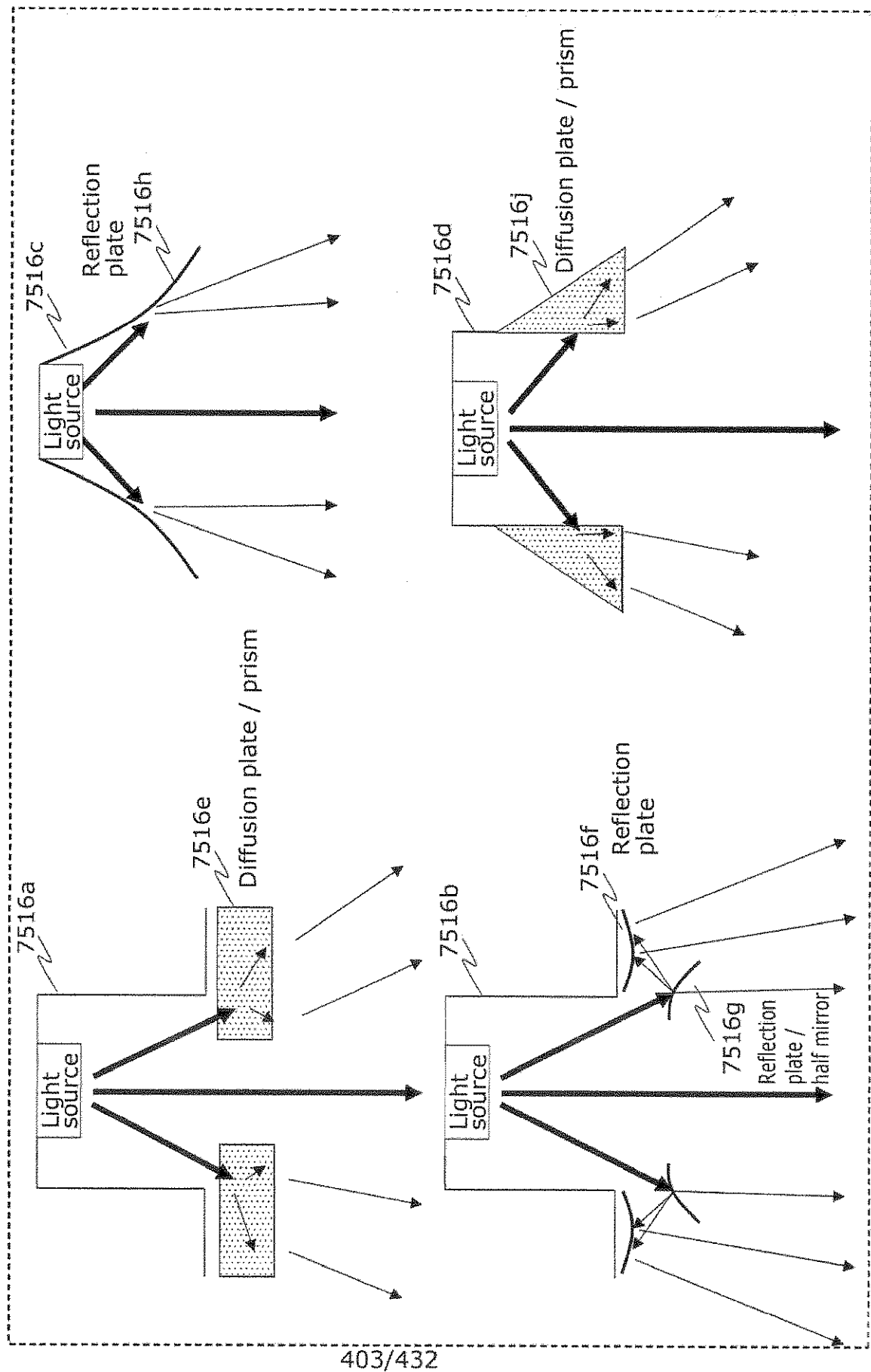


FIG. 379

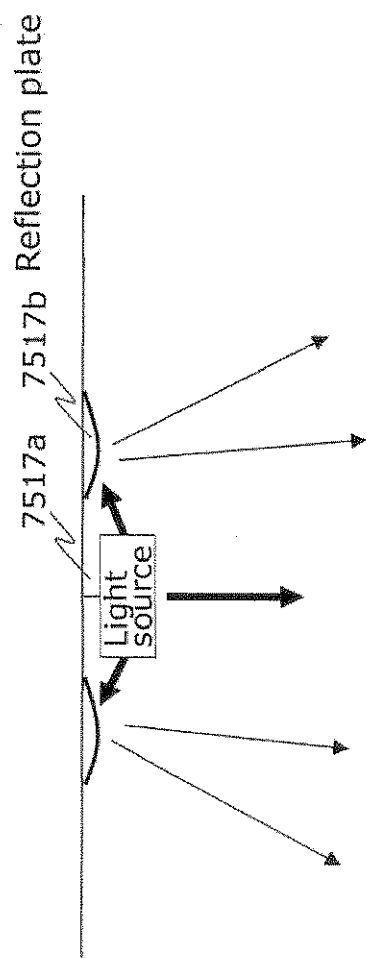


FIG. 380

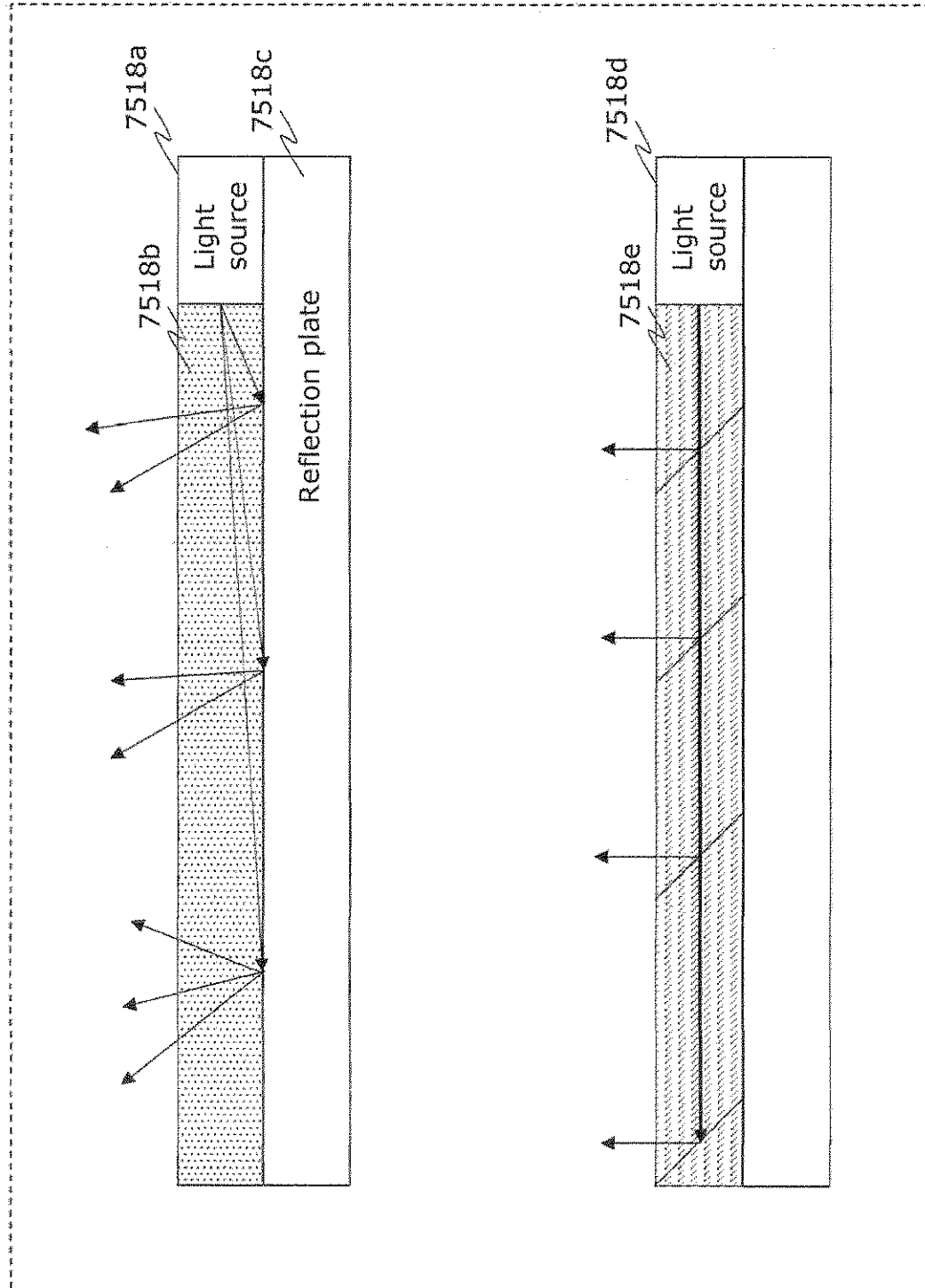
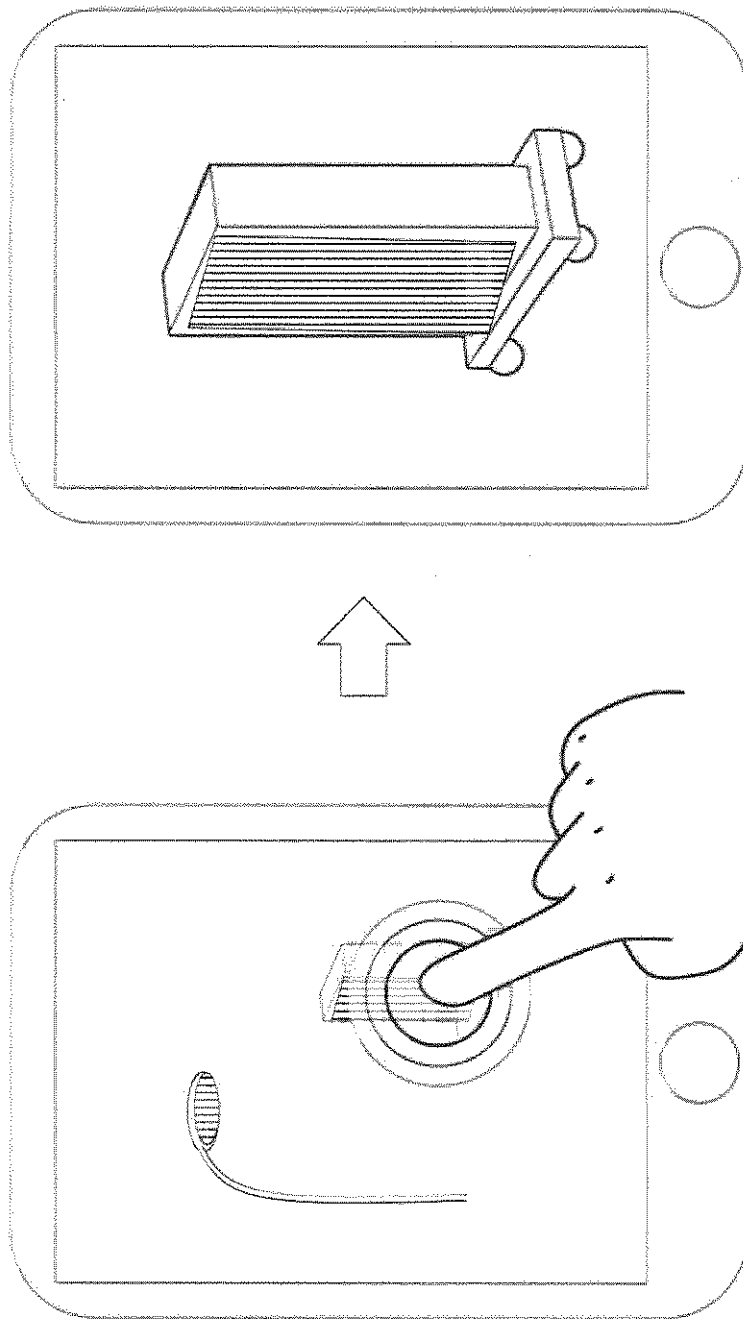


FIG. 381



Zoom in and receive signal

FIG. 382

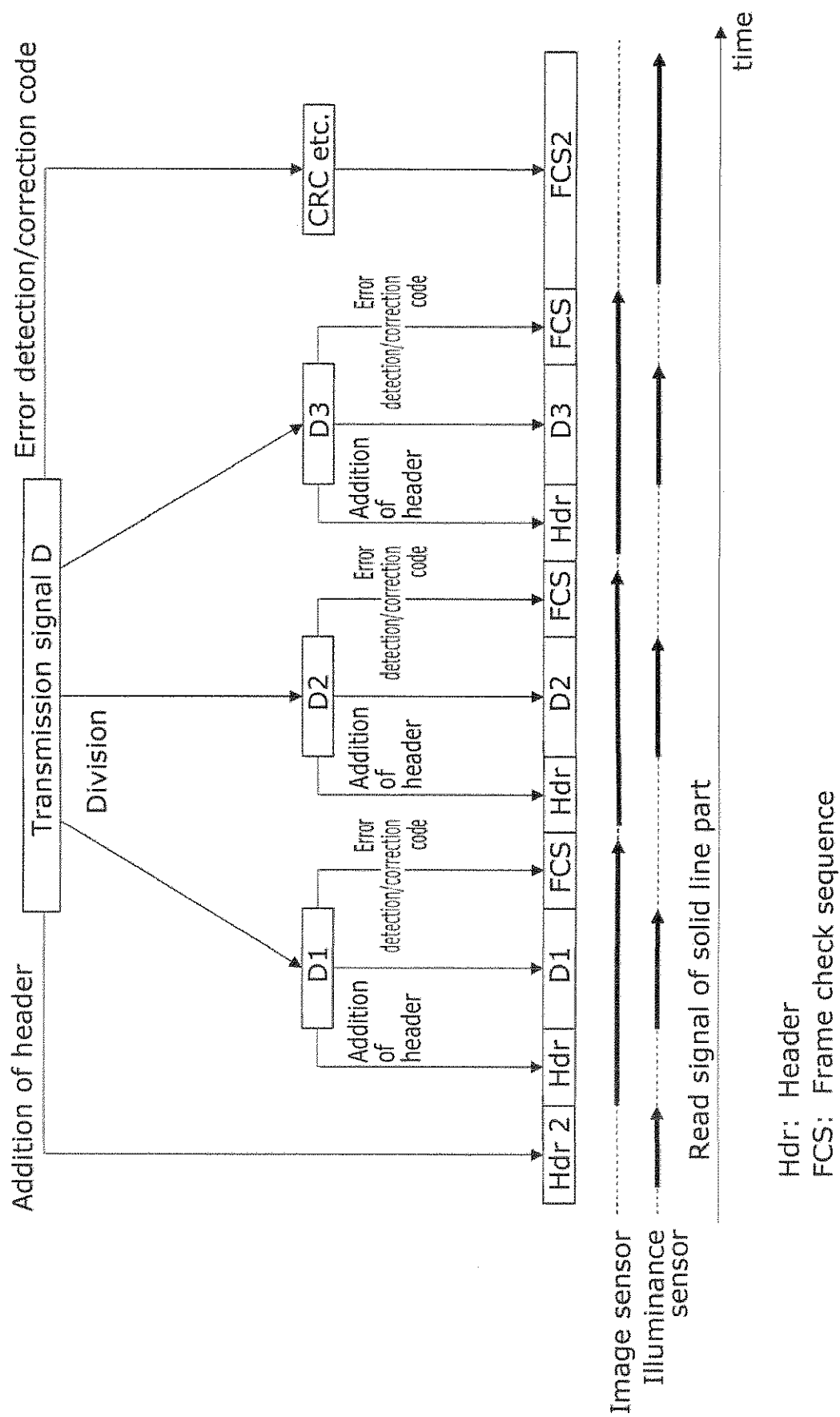


FIG. 383

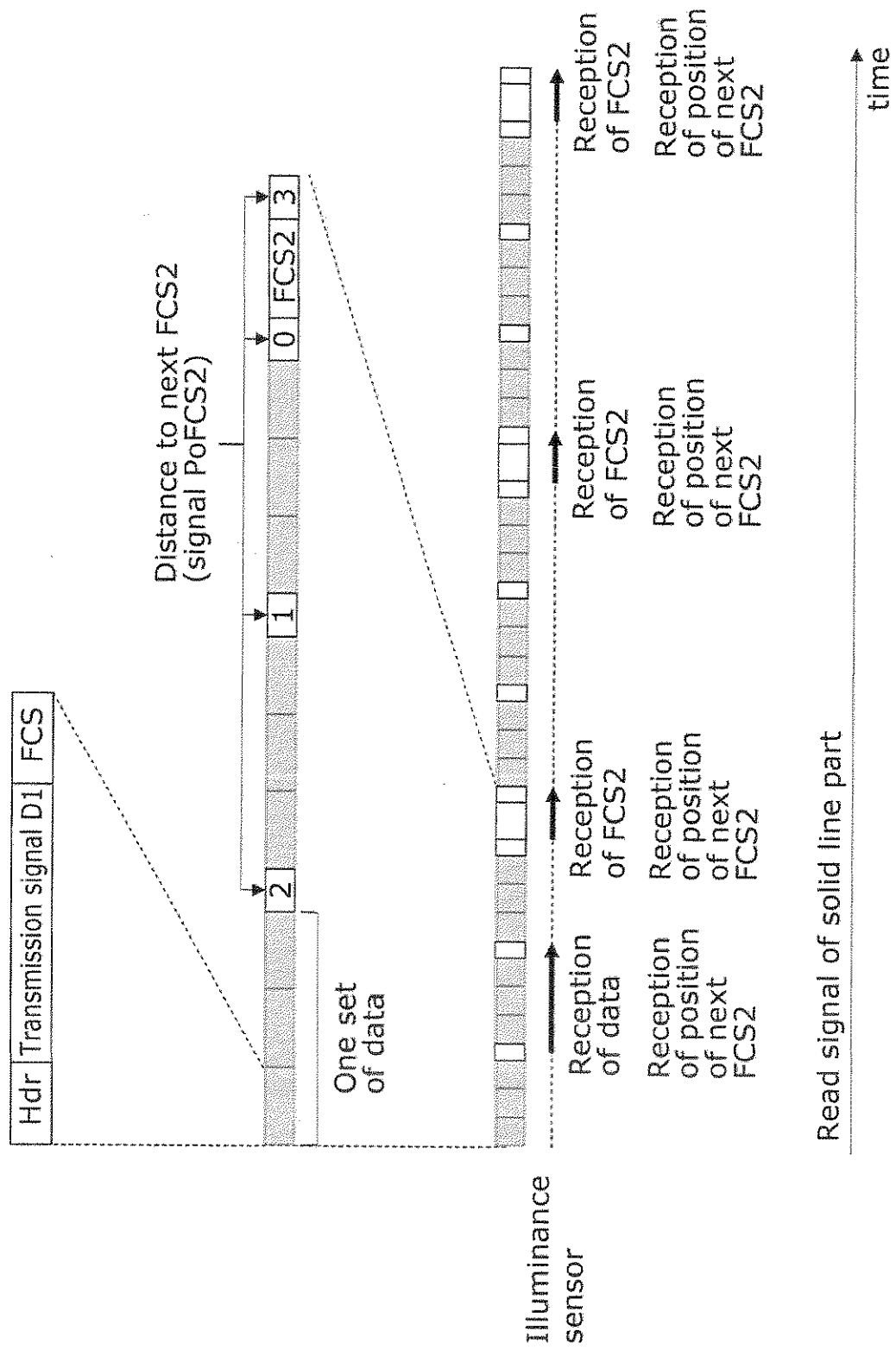


FIG. 384A

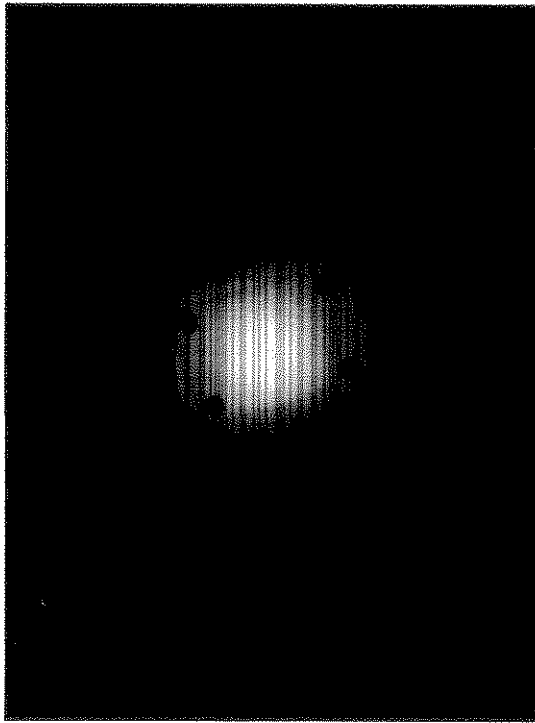


FIG. 384B

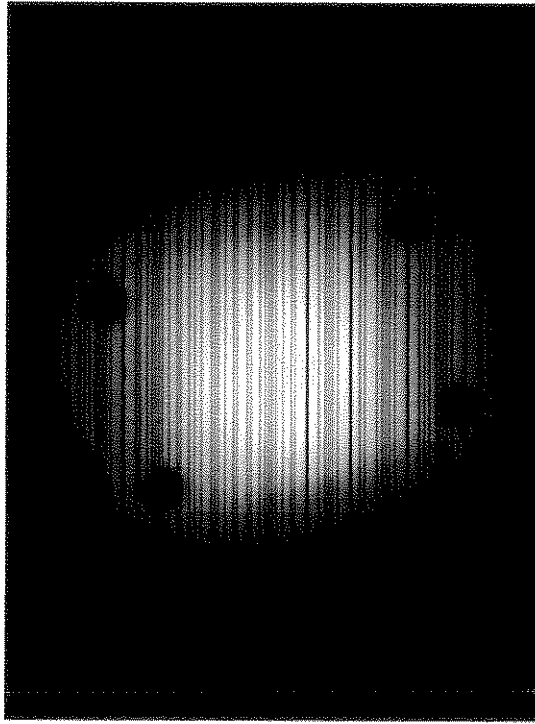


FIG. 384C

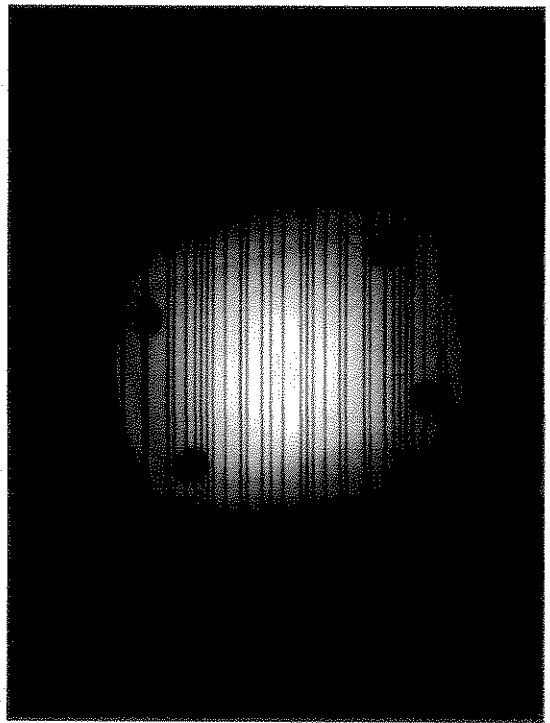


FIG. 385B

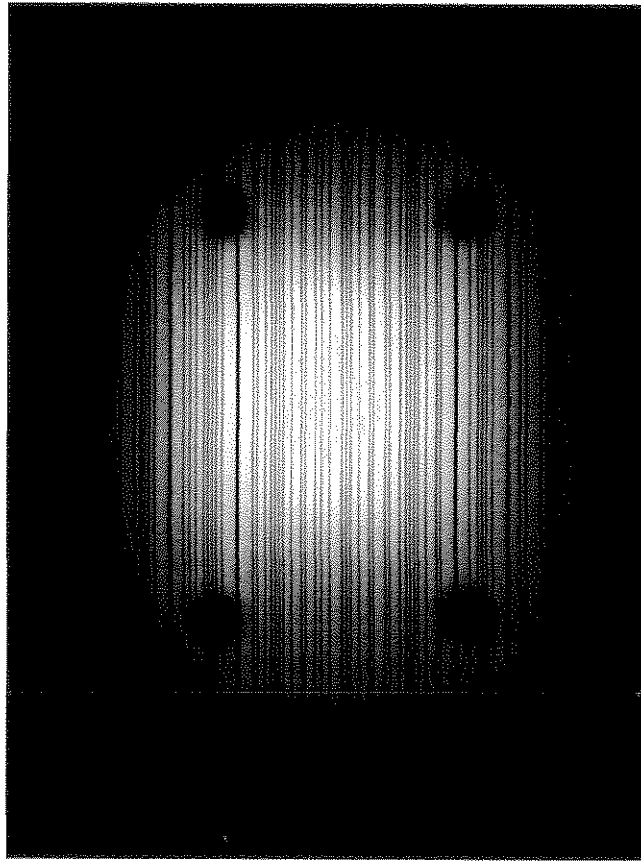


FIG. 385A

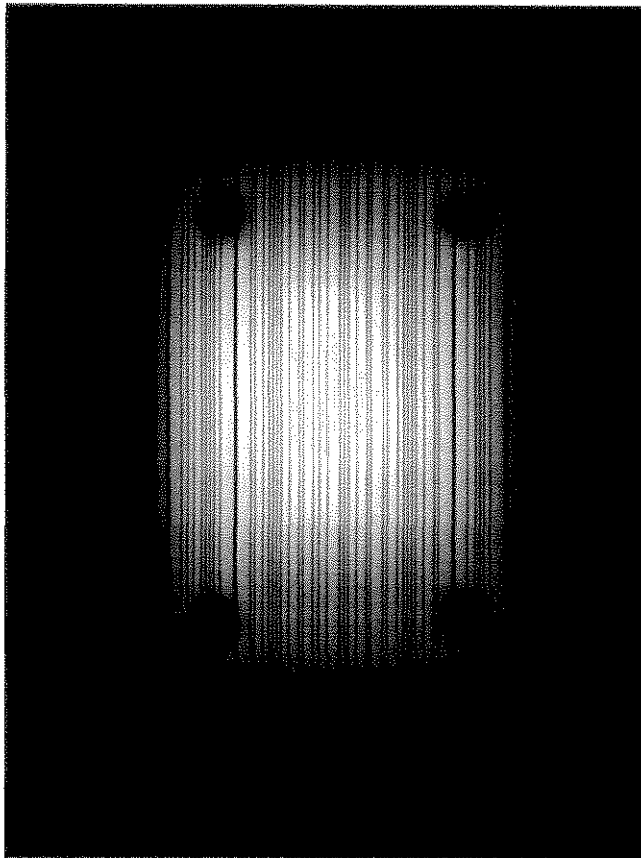


FIG. 386C

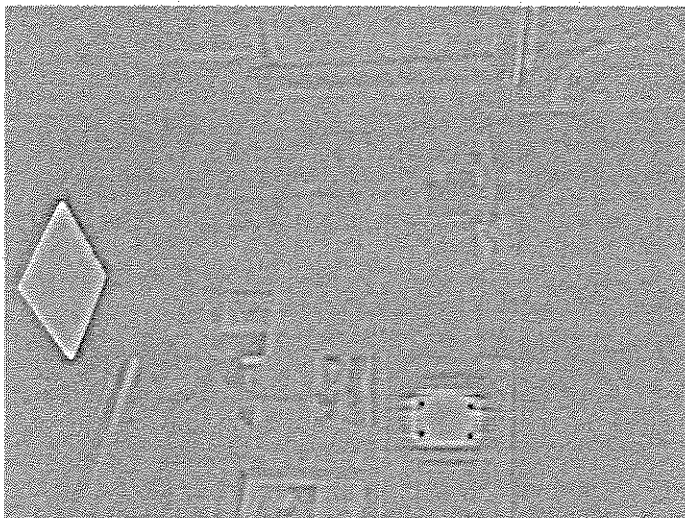


FIG. 386B



FIG. 386A



FIG. 387

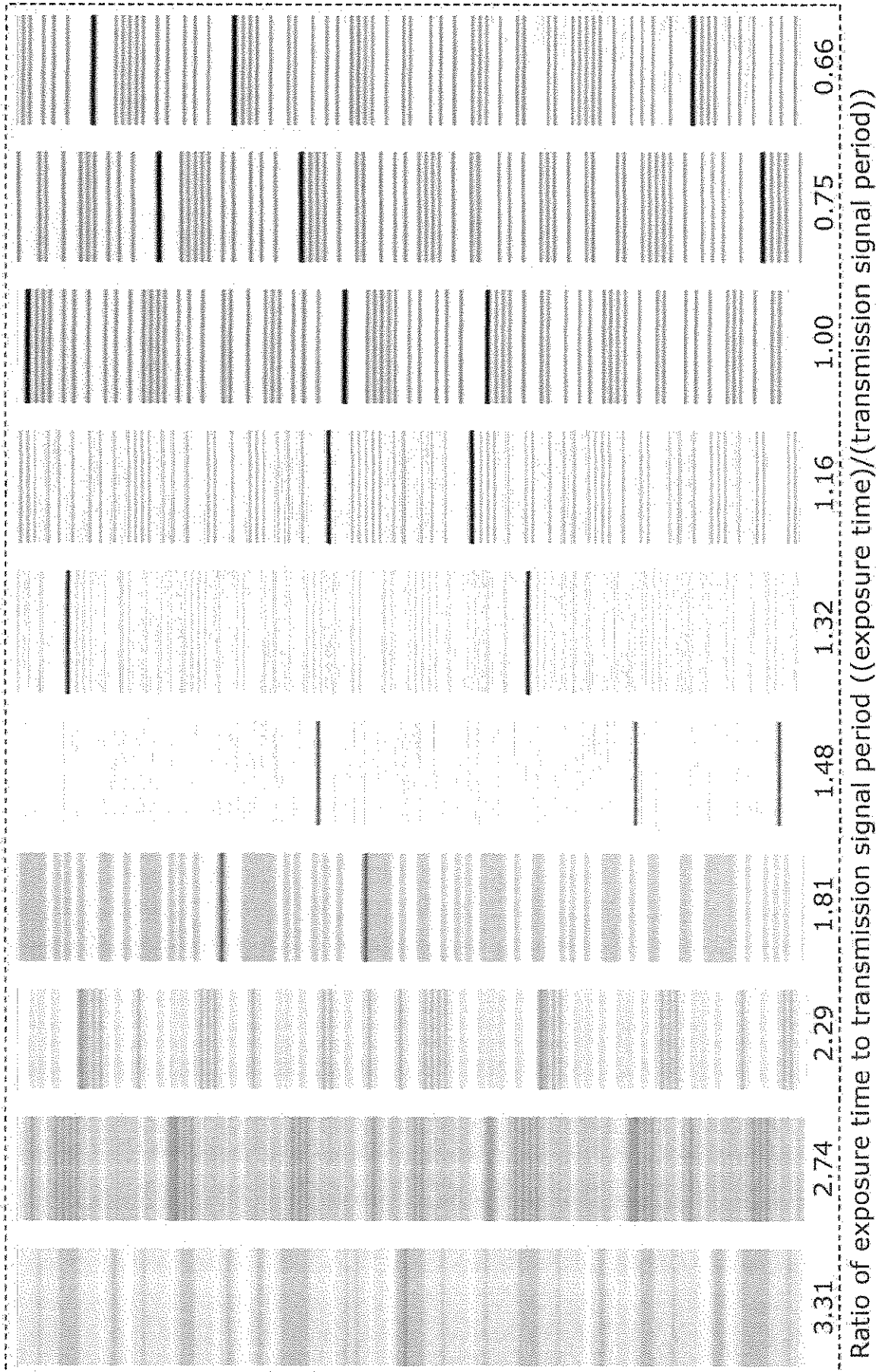


FIG. 388

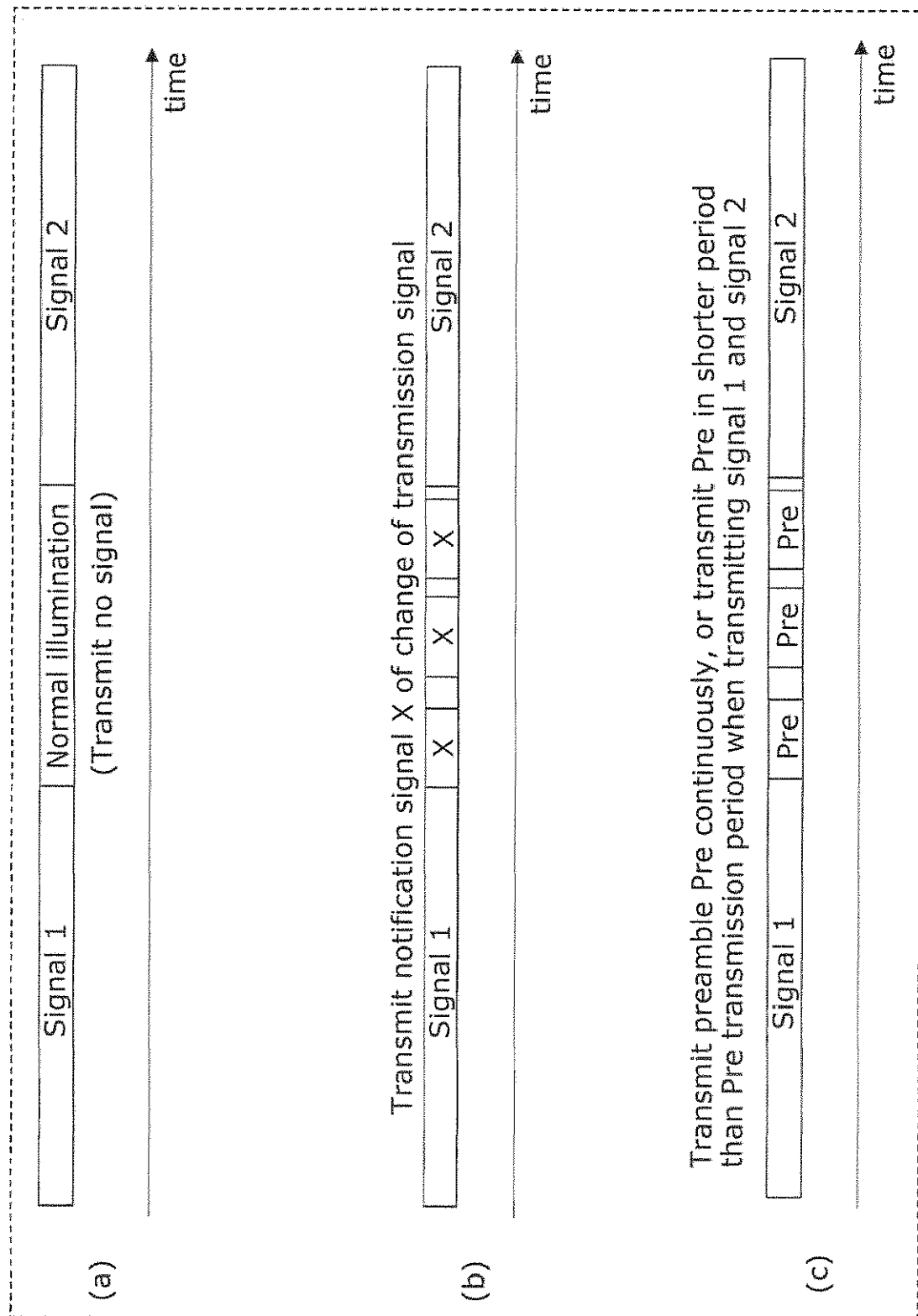
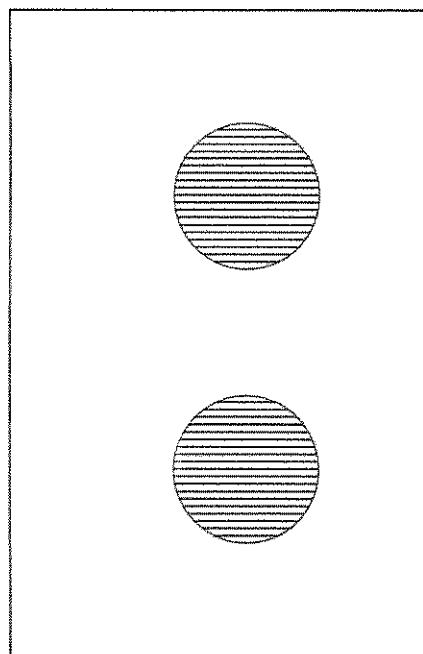
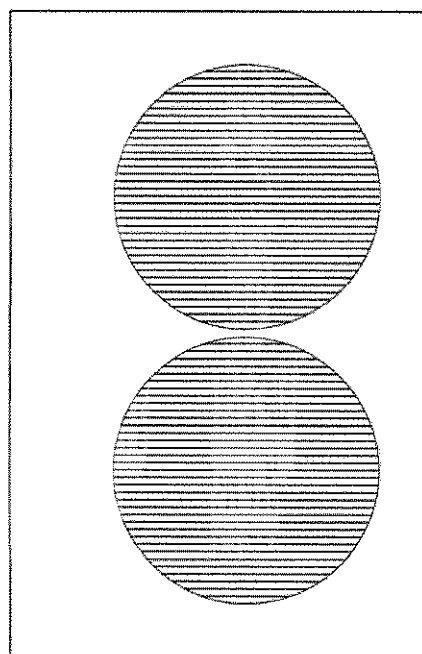


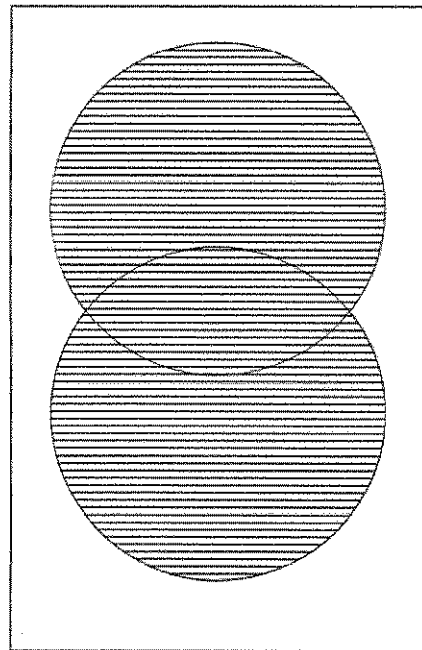
FIG. 389



(a)



(b)



(c)

FIG. 390

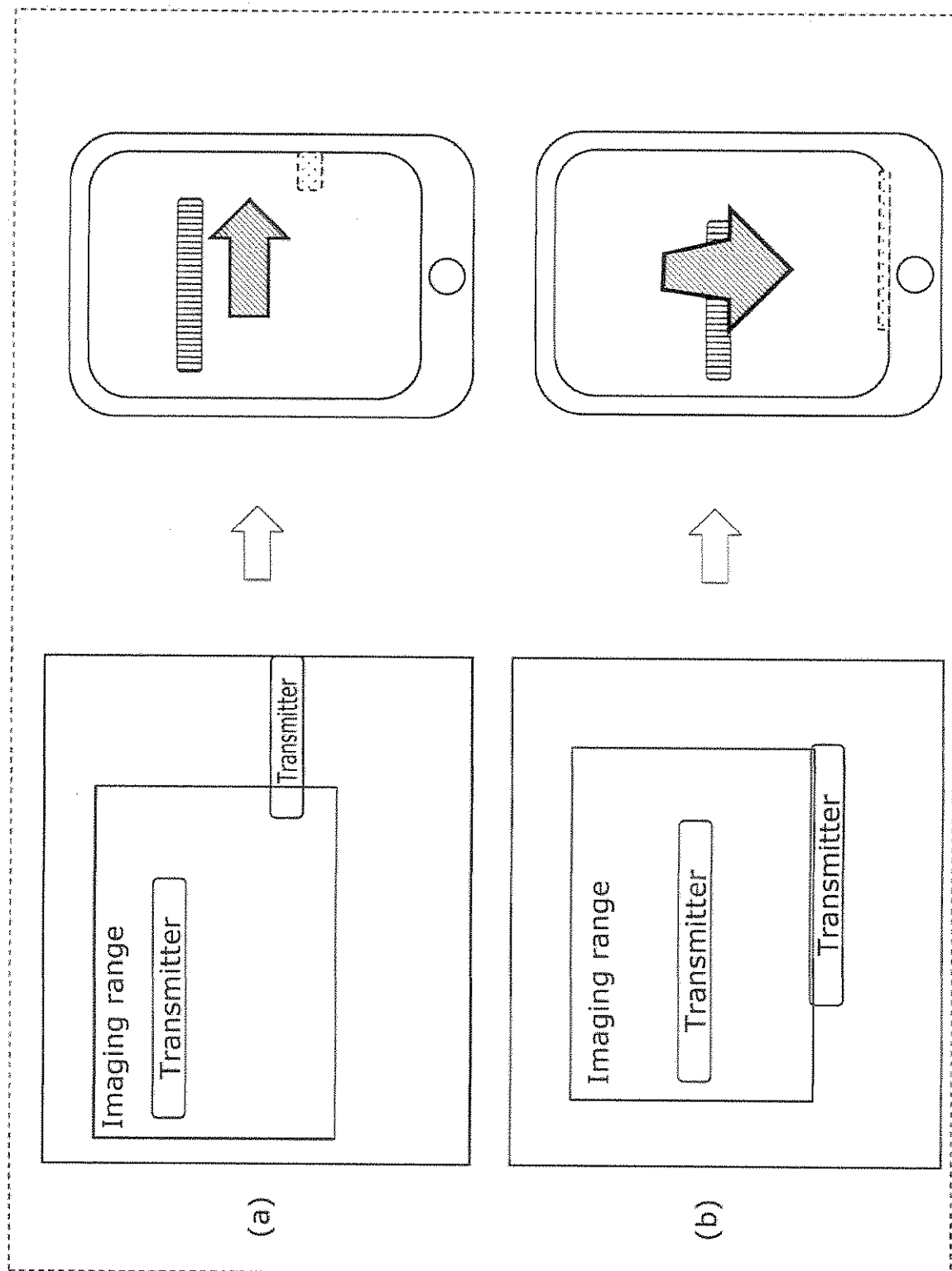


FIG. 391

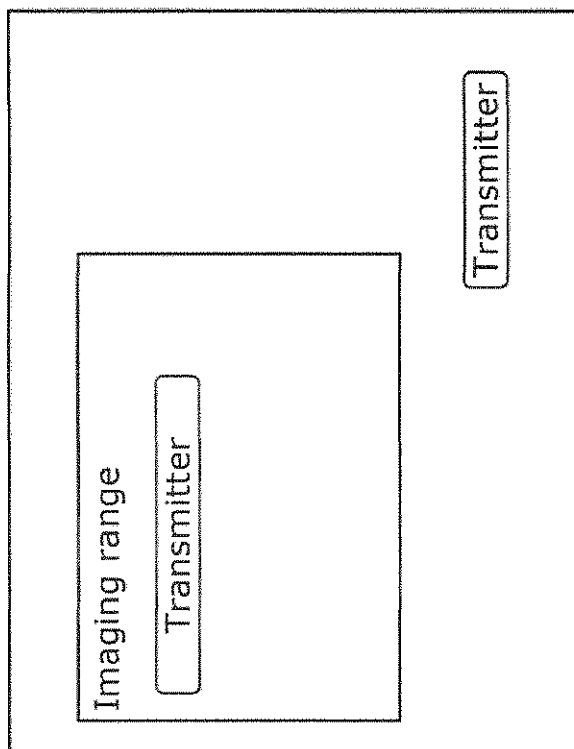
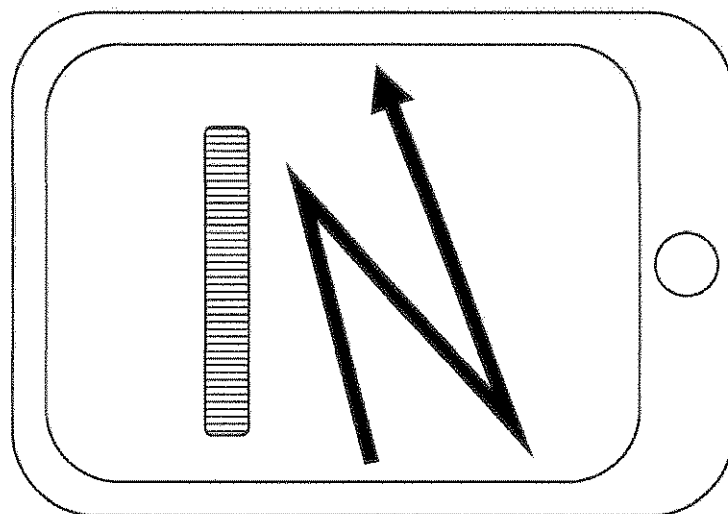


FIG. 392

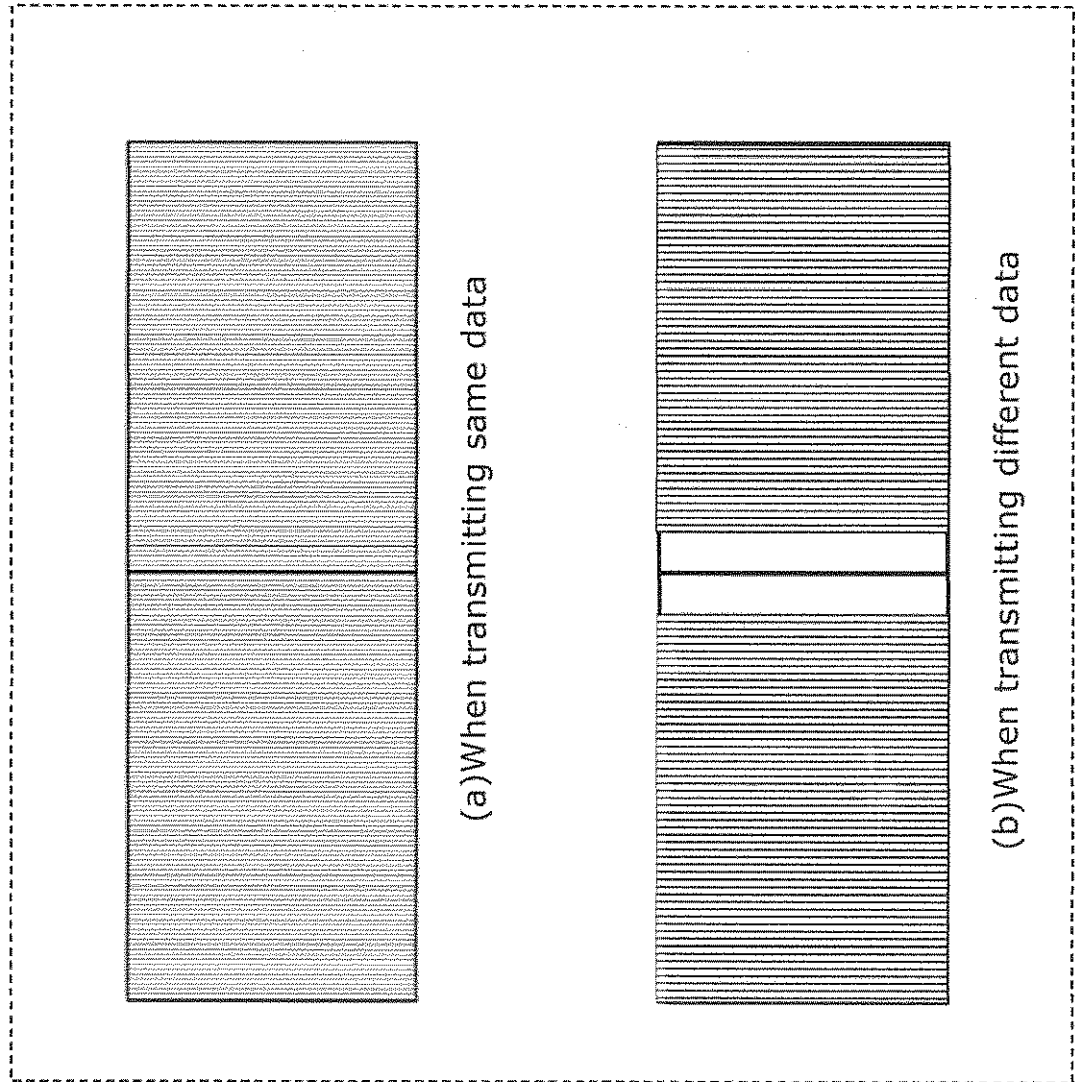


FIG. 393

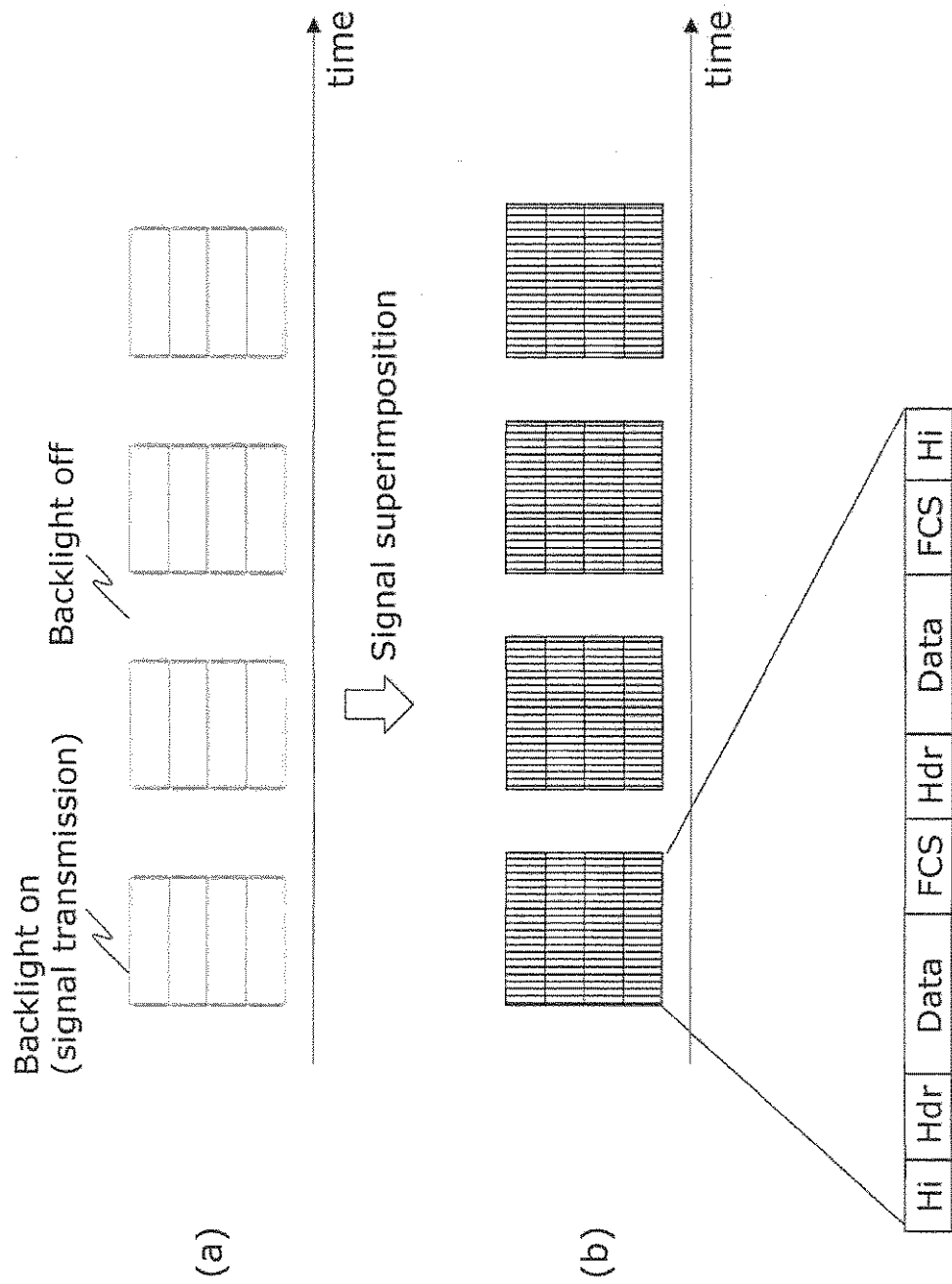


FIG. 394

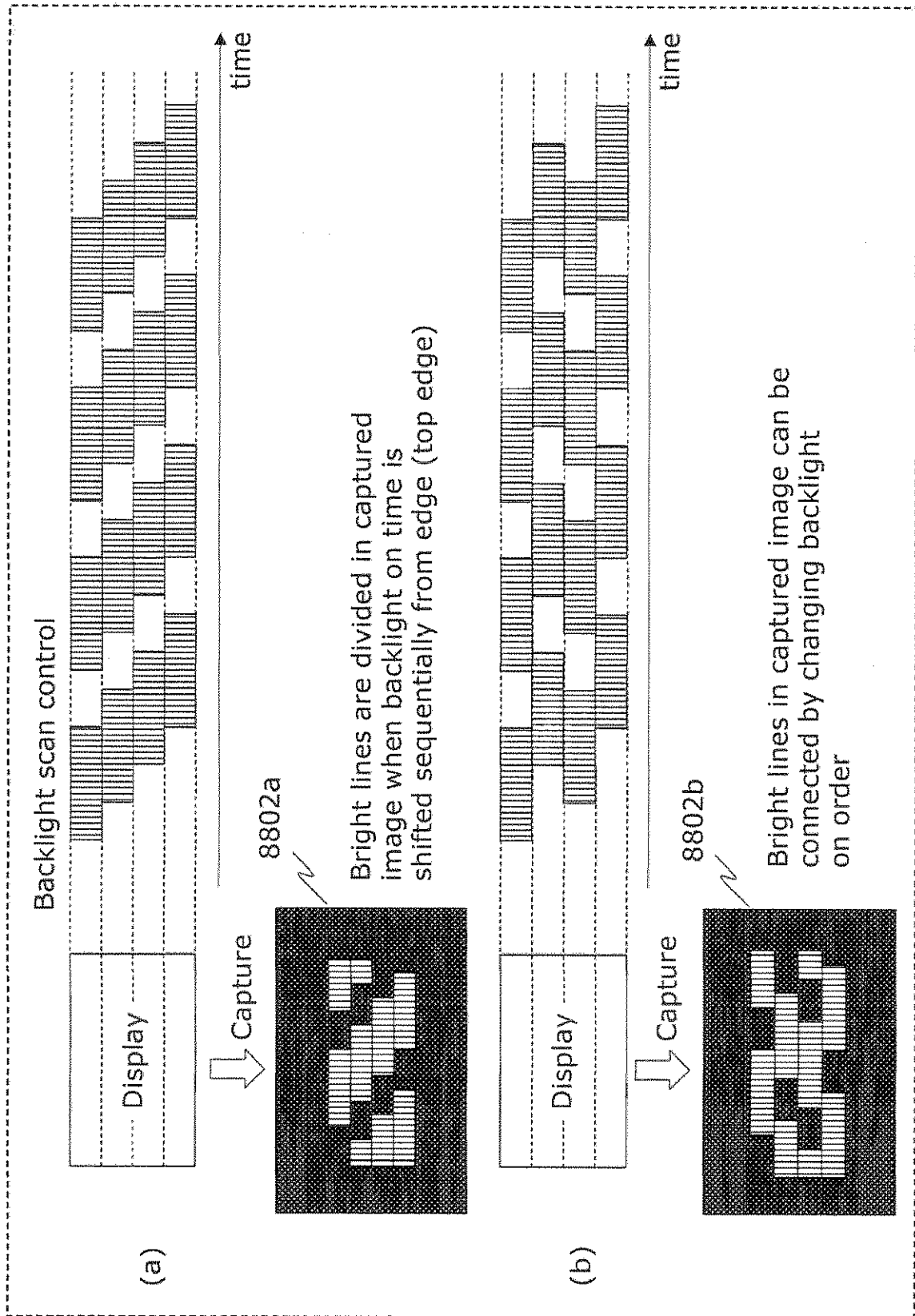


FIG. 395

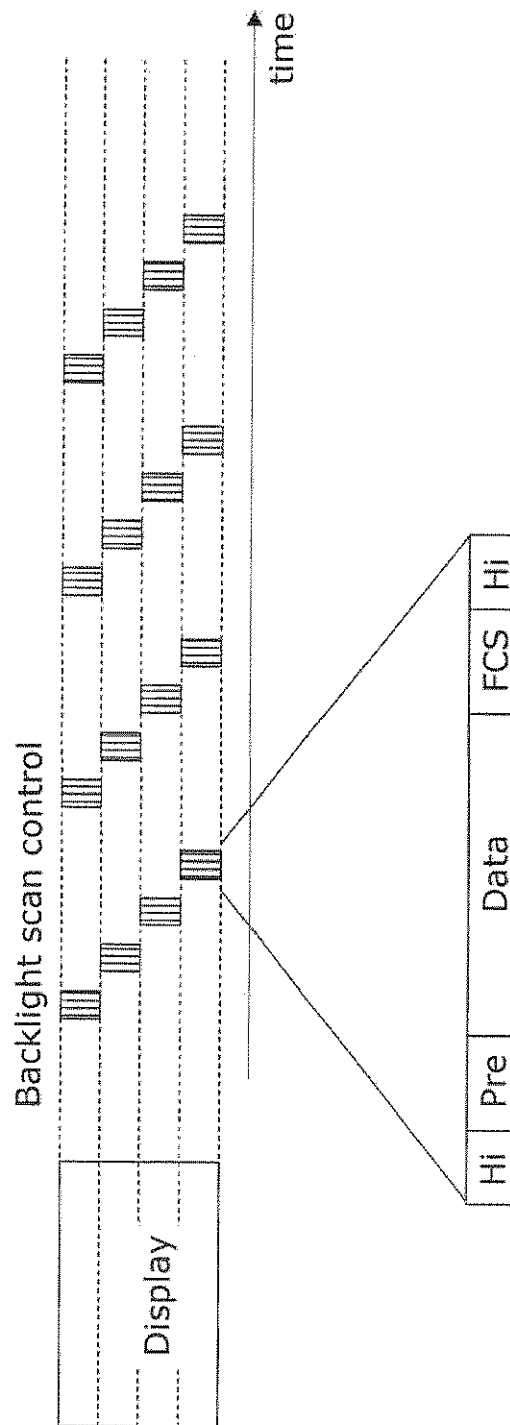


FIG. 396

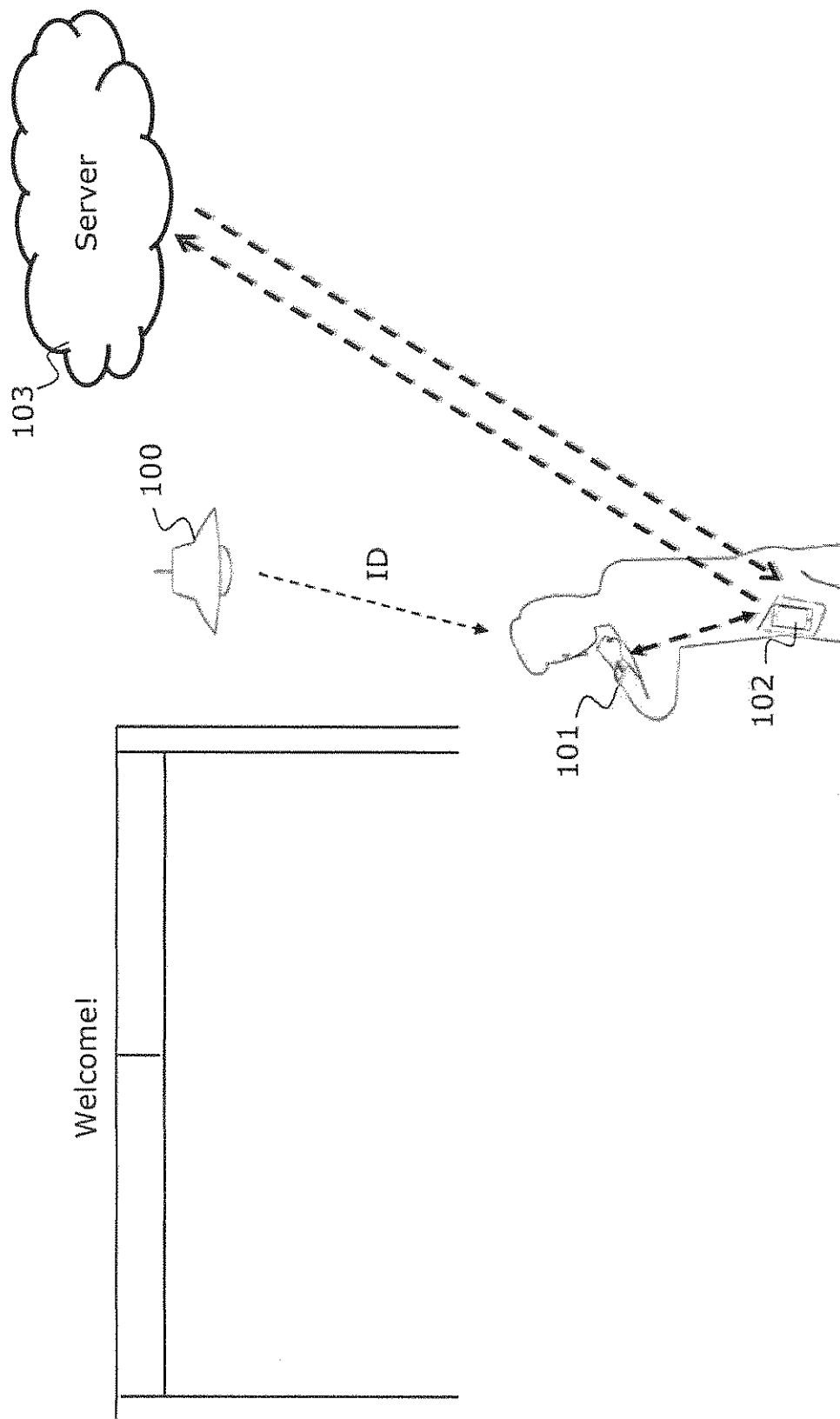


FIG. 397

Membership number	Store ID	Time	Position information
User preference information		User biological information	
User search history		User behavior history	

FIG. 398

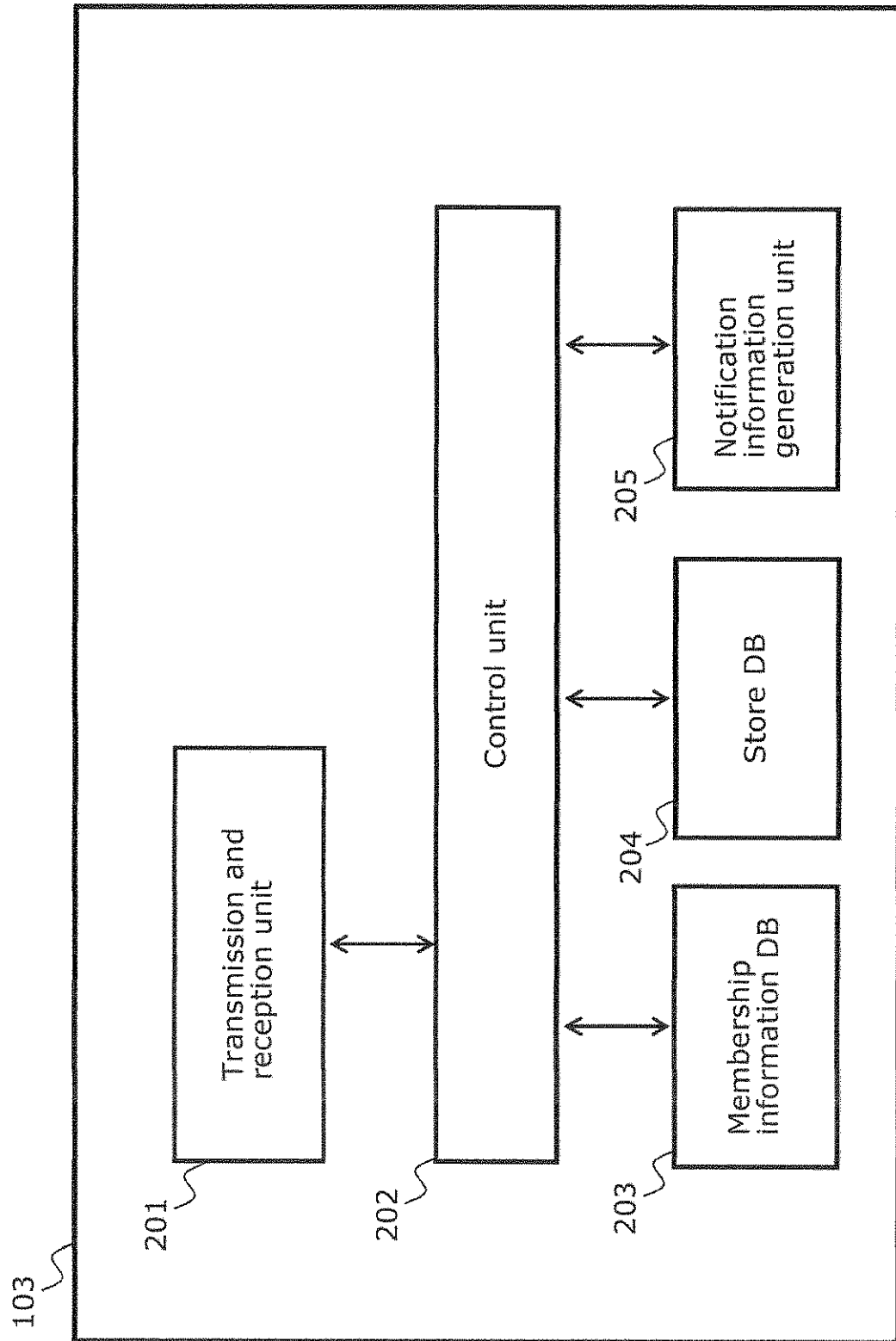


FIG. 399

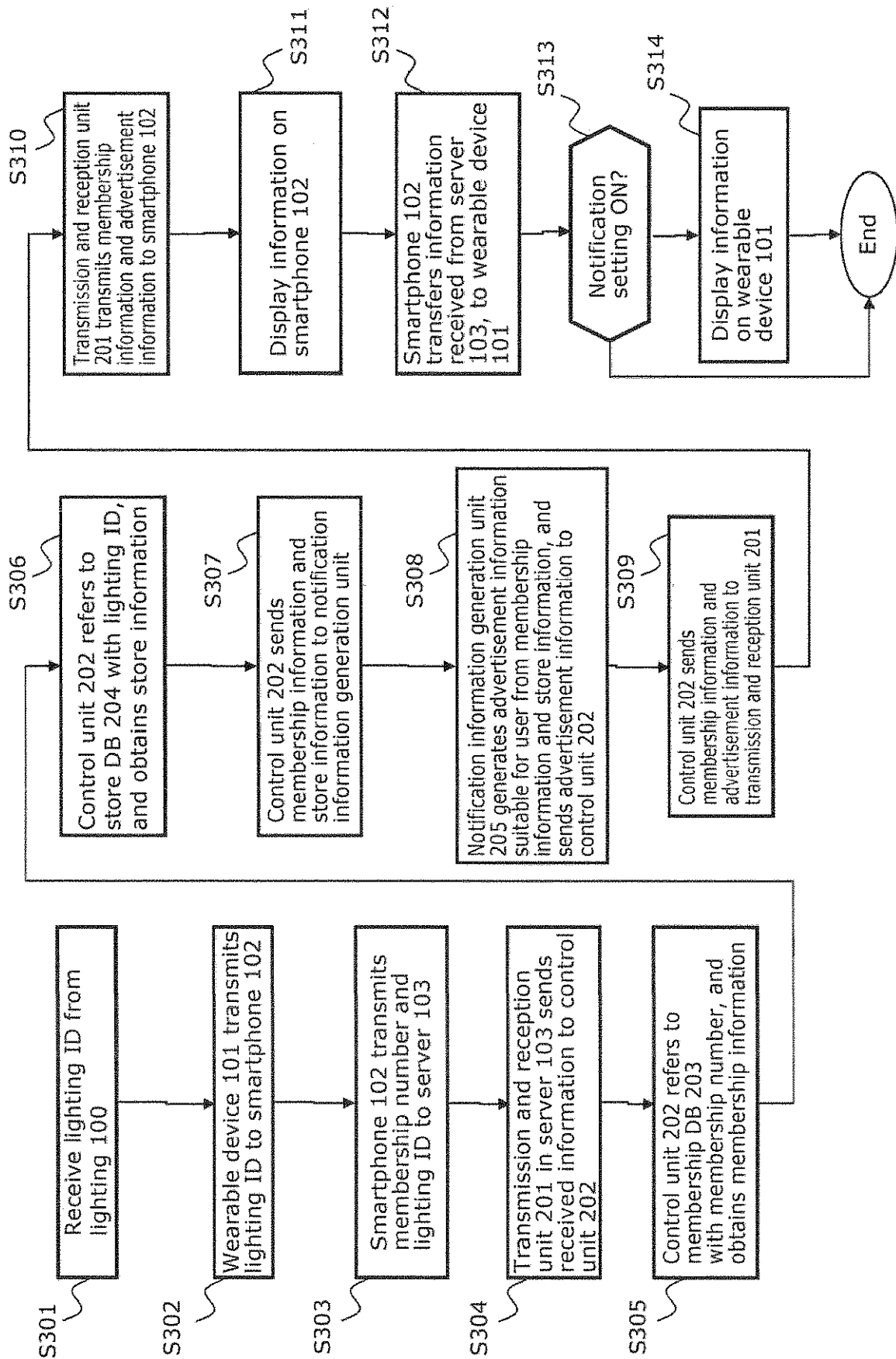


FIG. 400

Membership number	Store ID	Time	Store map DB
Coupon information Store product information	User membership information (points, expiration date, etc.)		

FIG. 401

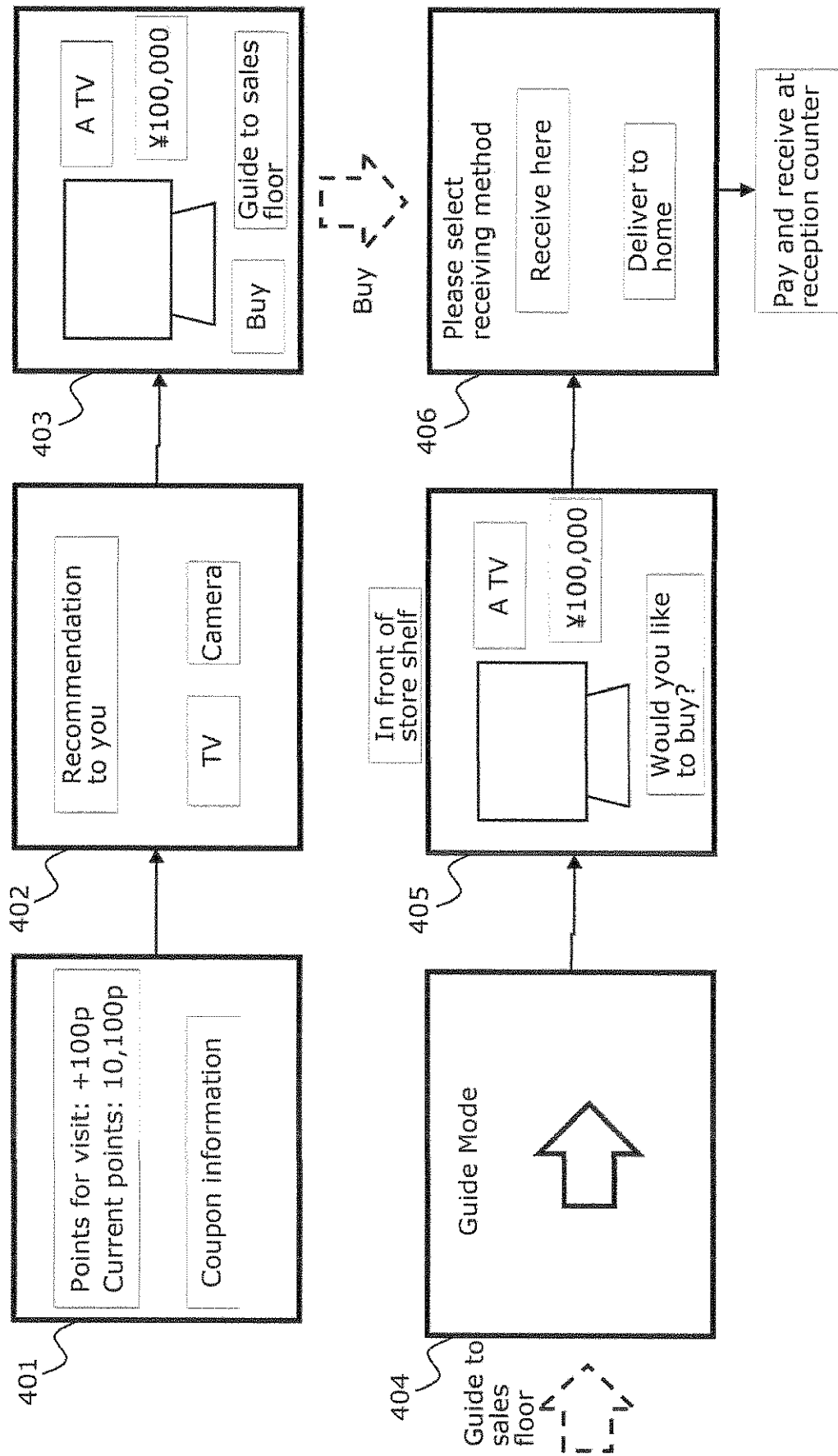


FIG. 402

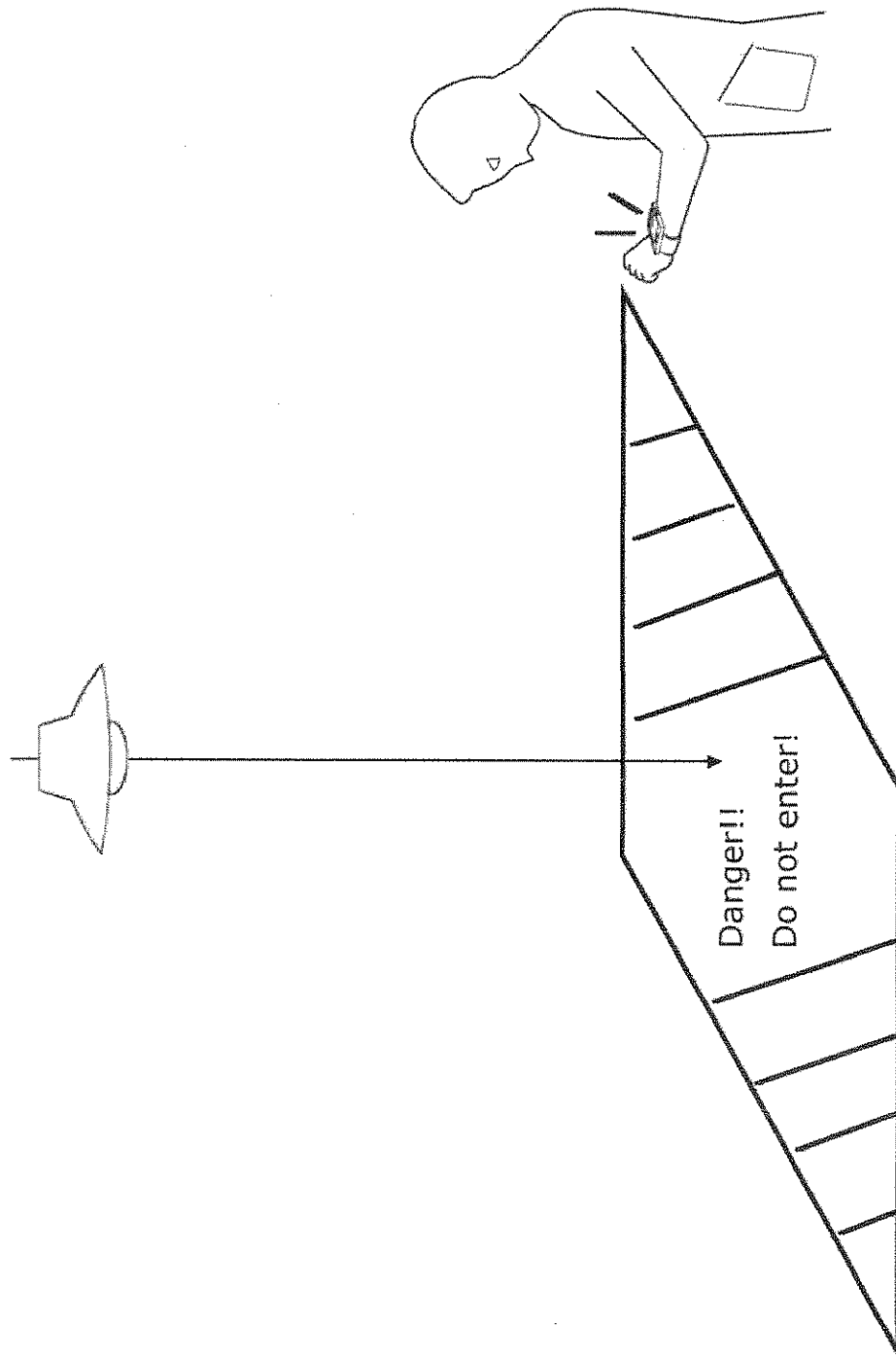


FIG. 403

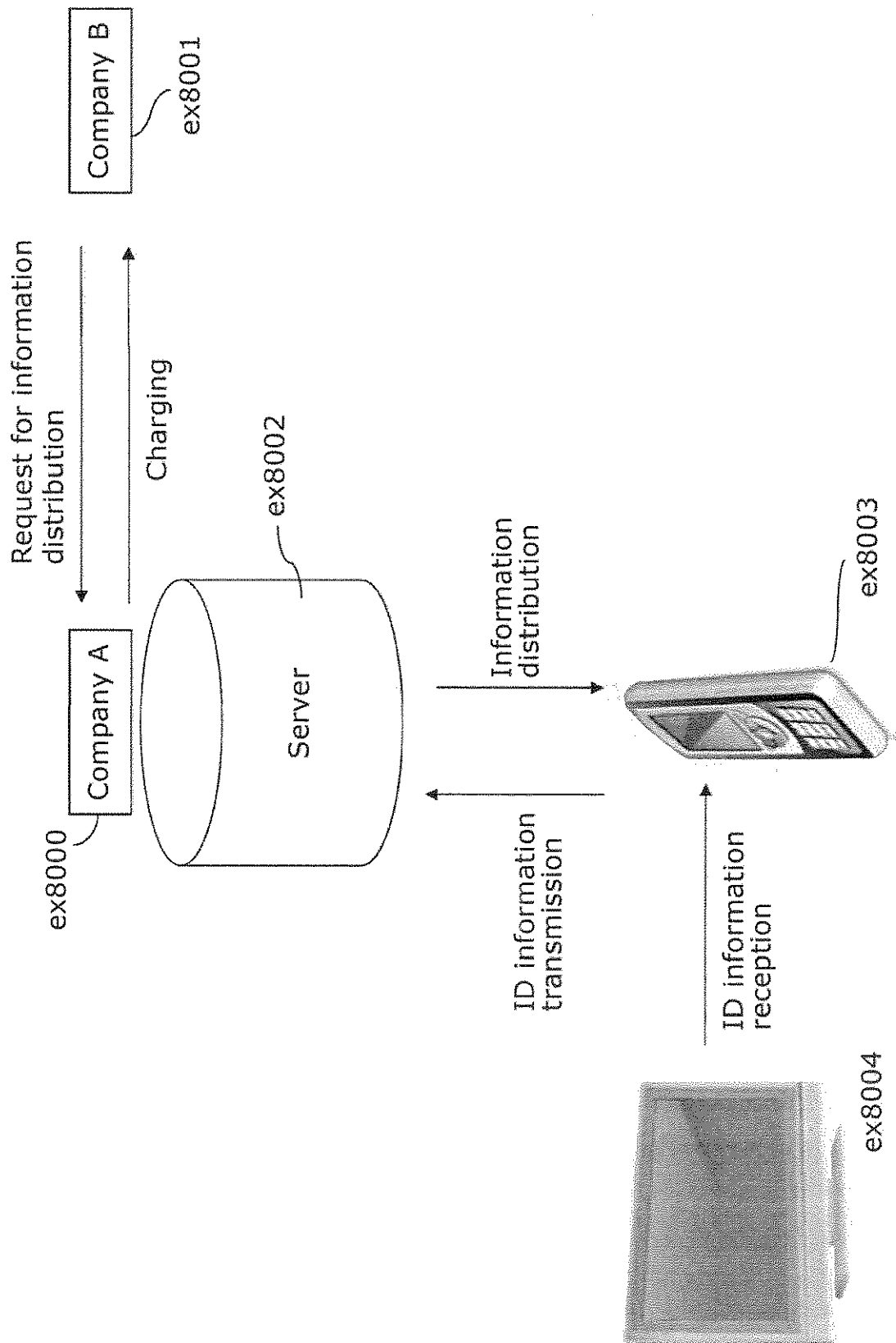


FIG. 404

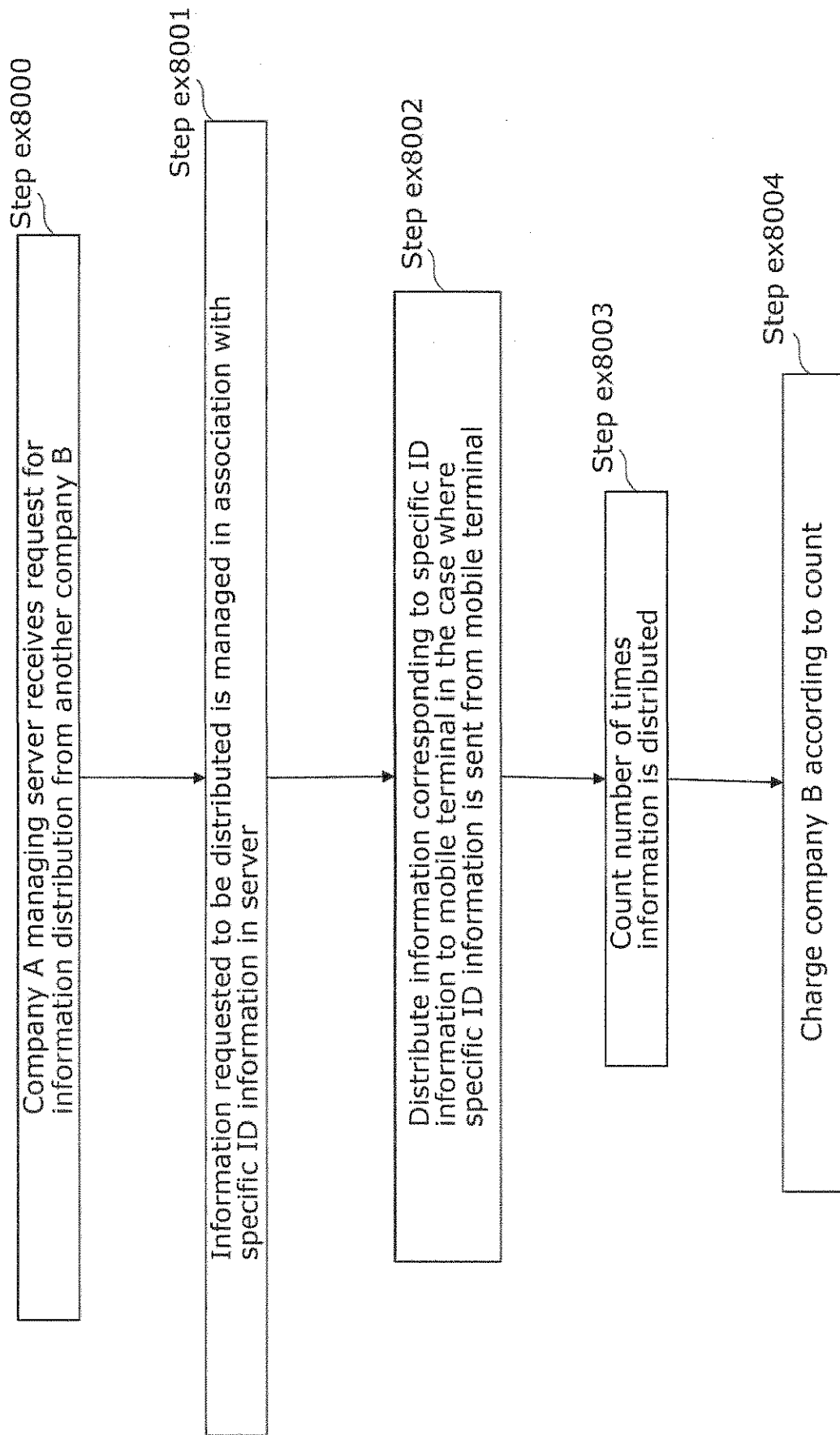


FIG. 405

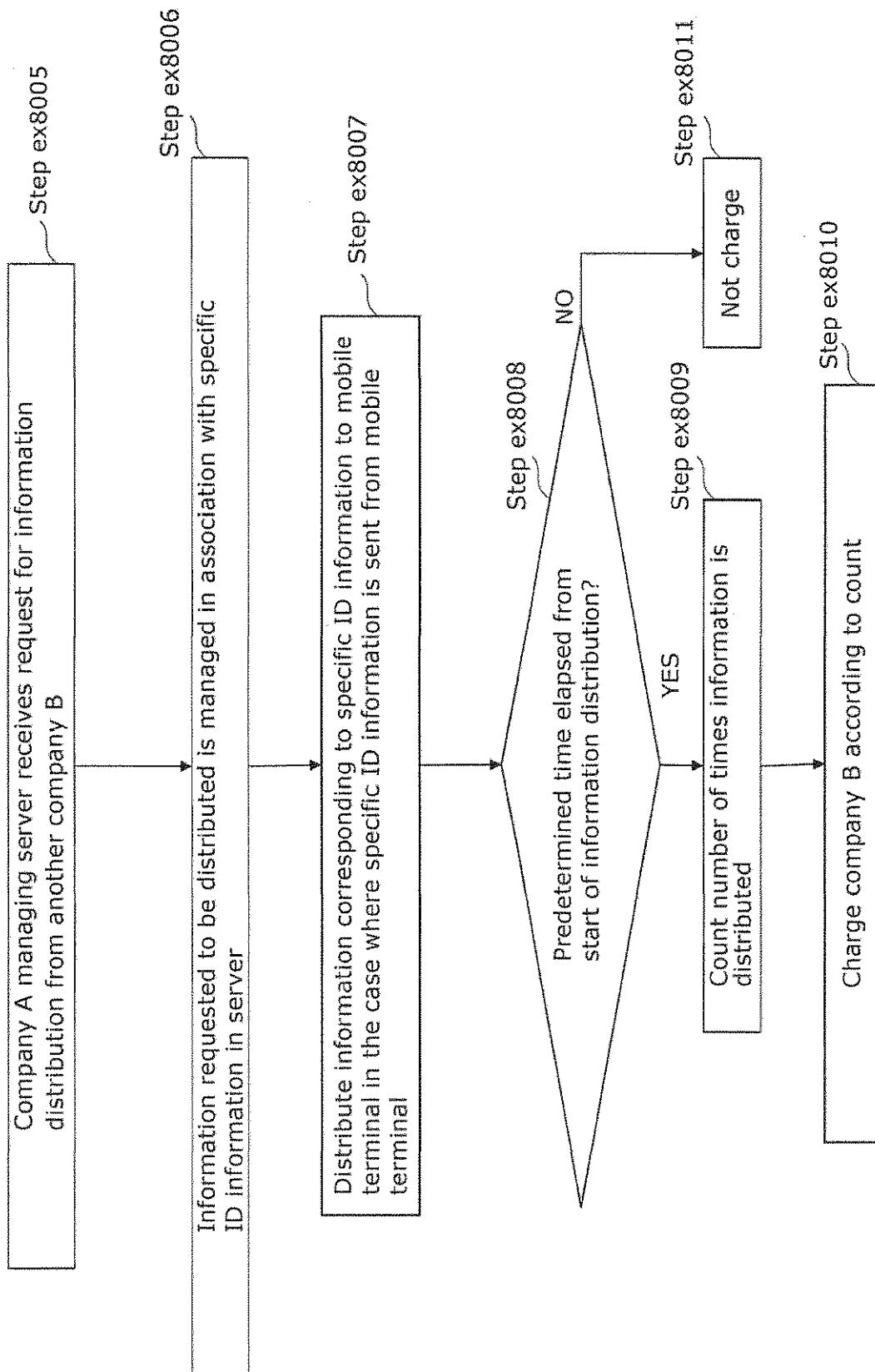


FIG. 406

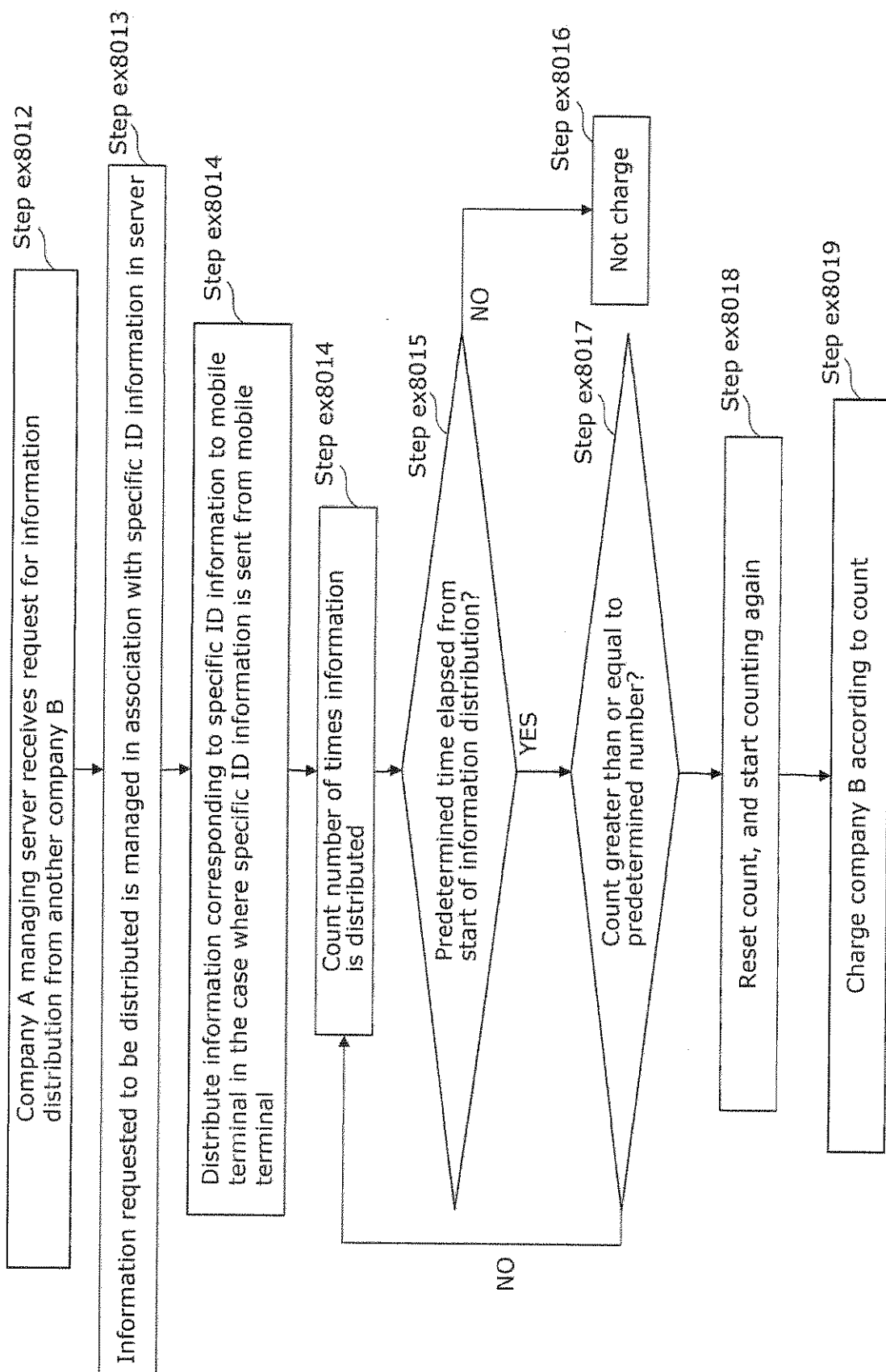


FIG. 407A

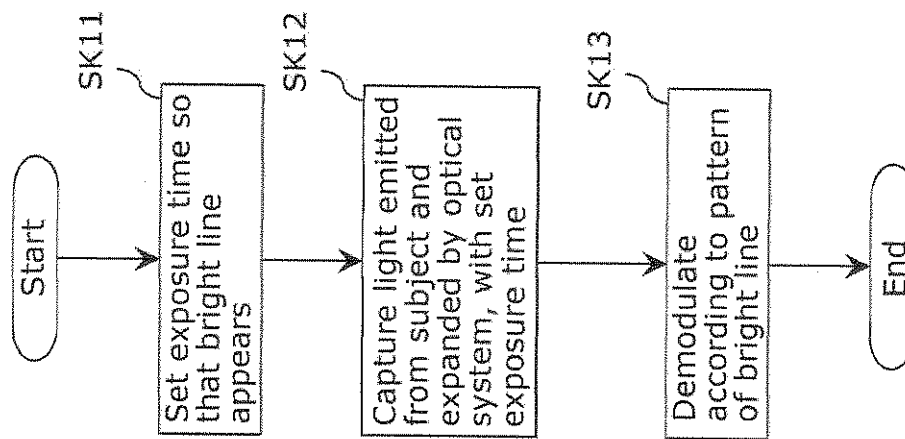


FIG. 407B

